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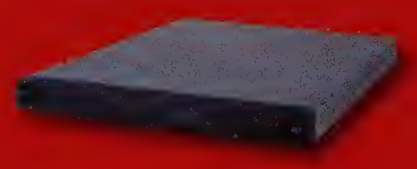

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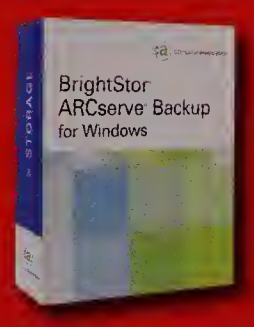

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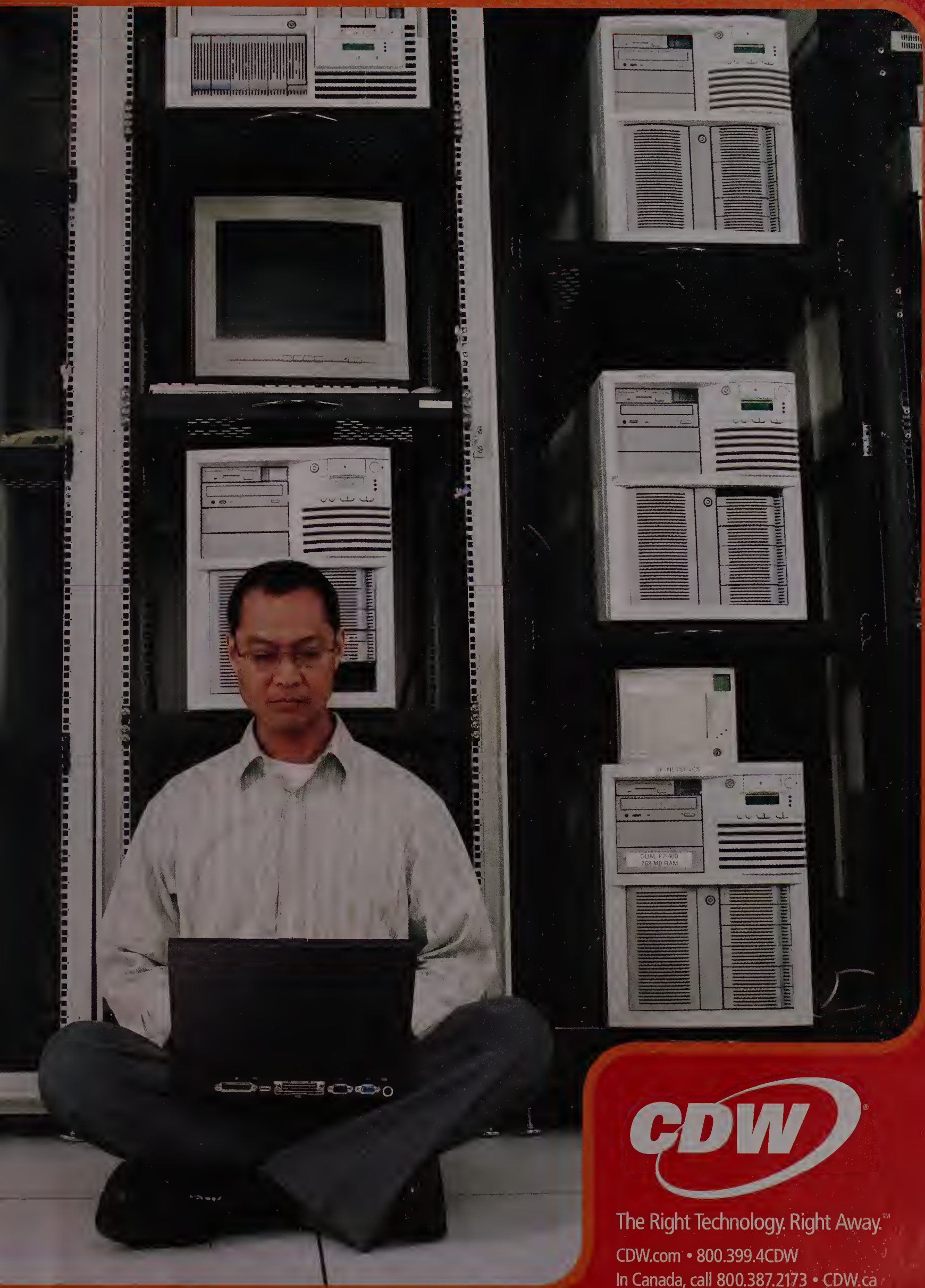
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Fall Season Newsletter.pdf	Today	2:09 PM
Spring Soccer Schedule.xls	Today	1:38 PM
Fall Soccer Schedule.xls	Yesterday	11:34 PM
Chargers Team Roster.doc	Yesterday	10:51 PM

74 more...

Images

Team One.jpg, Chris...her.jpg, AnnaB...eal.jpg, John...me.jpg, Charg...me.psd

No Date

28 more...

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Soccer	No Date
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Soccer Rosters	No Date
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Christy Thomas Re: Practice Today?	Today	5:25 PM
Larry Smith Coaching Clinic	Today	4:23 PM
Amanda Barnes Schedule Change	Today	2:51 PM
update@soccer.com March Newsletter	Today	1:27 PM
Bob Knight Practice Times	Today	9:07 PM

3726 more...

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Spotlight Soccer

Show all (203)

Top Hit: Re: Practice Today?

Mail Messages: Re: Practice Today?, Coaching Clinic, Schedule Change, March Newsletter

Contacts: Coach Smith, Alice

Documents: Spring Soccer Schedule.xls, Fall Soccer Schedule, Chargers Team Roster.doc

Images: Team One, Christopher, John After Game

Events & To Do's: San Diego Tournament, Thursday Practice, Regionals

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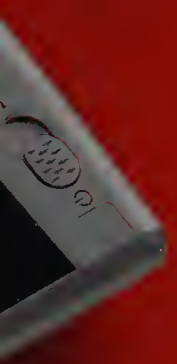

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FEATURES

WORLD CLASS AWARDS

86 **The 100 Best Products of 2005**

Hunting for top-notch hardware, software, and services? After careful consideration, we've assembled our annual list of the finest PCs, components, peripherals, consumer electronics devices, applications, and online resources—starting with a speedy, friendly, and safe browser that has set the Web world on fire.

DIGITAL CAMERAS

107 **Choose Your Perfect Camera**

Different digital cameras suit different people and different uses. Whether you're a beginner or a longtime shutterbug, a sports fanatic or a nature lover, an inveterate traveler or an underwater paparazzo, you'll find a camera just right for you in our overview of models designed to meet particular needs. Plus: Tips covering online photo sharing, scene modes, swiveling LCDs, and more.

COVER STORY

74 **Thirty Things You Didn't Know You Could Do on the Internet**

The Web continues to reveal its boundless riches, from mainstream to oddball. Find out how to get invaluable small-business help, blog almost instantly, build an online store, score free tech support, podcast without a PC, and even track your greenbacks (don't ask us why). And that's just for starters.

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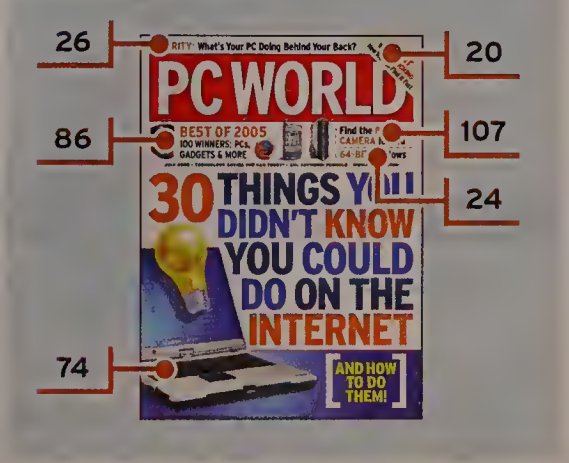

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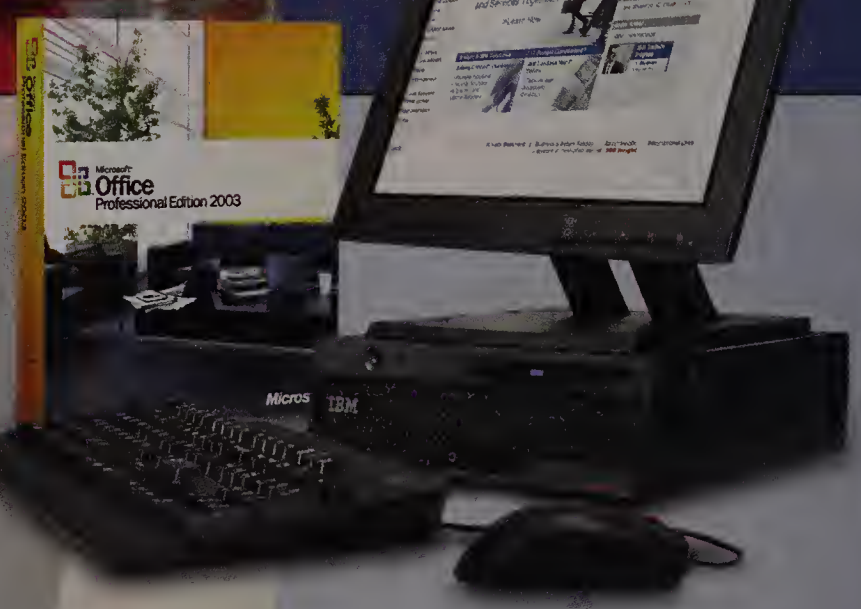

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COMING UP IN AUGUST

The New Wireless Network: We test the range and performance of the latest wave of routers and PC Cards.

Omnipresent PC: Remote-access apps offer a slew of new options. We reveal which packages work best.

Upgrade Guide: Add massive storage, boost security, pump up your speed, and create a media center.

Personal Video Recorders: Watch TV the way you want, when you want. We evaluate various solutions.

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Under pressure from adware companies, anti-spyware vendors may 'delist' some sneaky apps.

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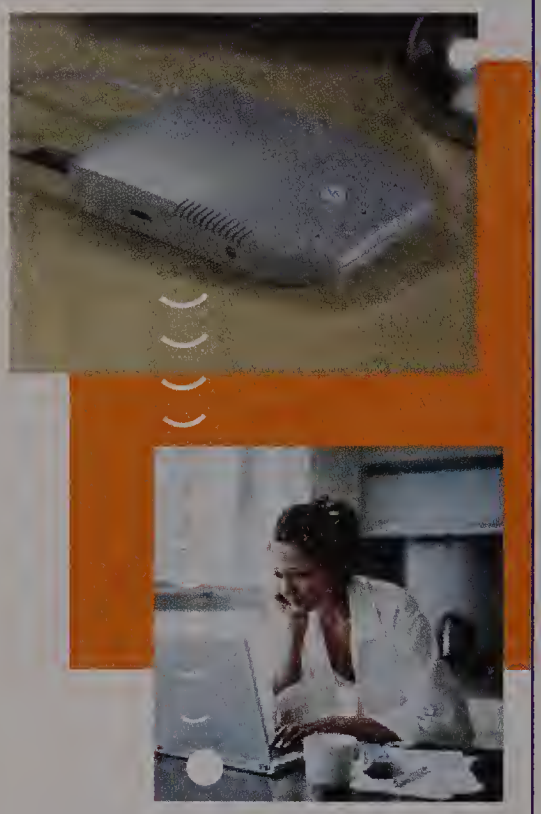

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actual operating speed of 1GB/sec. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required. **1100MP Lumens:** Based on ANSI/NAPM IT7 .228-1997 tests of 58 units, December 2004, with average ANSI Lumens 2113. Lamp brightness degrades with usage. Dell recommends replacing your lamp after 2000 hours of usage (up to 2500 hours in Eco-mode). **Hard Drive:** For hard drives, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less. For hard drives, one TB = one trillion bytes; actual capacity varies with preloaded material and operating environment and will be less. **Mail-in Rebate:** Rebate coupon requests must be postmarked within 30 days of ship date and rebate checks are ordinarily processed within 8-10 weeks. See http://www.dell.com/smallbizrebates or call 1-877-773-3355 for rebate coupon and details. **Printer Toner Yield:** Laser monochrome print cartridge yield based on 5% page coverage; color print cartridge yield based on 20% page coverage. Yields vary with usage and environmental conditions. **Free 3-5 Day Shipping:** Free shipping is lowest cost (3-5 day) shipping. Valid for U.S. Small Business new purchases only. Available in Continental (except Alaska) U.S. only. To qualify for free shipping, minimum purchase thresholds may apply. Call or go online for details. Systems free shipping offers exclude Software and Peripheral (S&P) orders under $59, all S&P orders placed by phone, and S&P orders placed in systems configurator pages. S&P free shipping offers apply to S&P orders purchased in the S&P Online store and/or by phone. Free shipping on S&P does not apply to S&P in the online system configuration pages, but can be combined with other offers. **Trademarks/Copyright Notices:** Dell, the stylized E logo, E-Value, Dimension, Inspiron, Latitude, OptiPlex, PowerEdge, Dell Precision, PowerConnect, CompleteCare, ExpressCharge, Tri-Metal and UltraSharp are trademarks of Dell Inc. Intel, Intel Inside, the Intel Inside logo, Intel Centrino, Intel Xeon, Pentium and Celeron are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Digital Light Processing, DLP, the DLP logo and the DLP medallion are trademarks of Texas Instruments. Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. EMC is a registered trademark of EMC Corporation. ©2005 Dell Inc. All rights reserved.

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Now on TV: PC World's Digital Duo

Our new show offers a fresh, opinionated look at technology...times two.

AT THE NEWSSTAND, in your mailbox, on the Web—there have always been multiple ways to get *PC World*. And now we're coming at you in a whole new medium: television. The show is *PC World's Digital Duo* (call it *PCWD2* for short), and it began airing on public TV stations in April.

The Duo in question consists of two exceptionally opinionated, tech-savvy individuals. One of them you know: Stephen Manes, whose *Full Disclosure* has crankily anchored our back page for years. The other you may not, but you should: Cohost Angela Gunn first wrote about the Internet in 1989 and has covered the tech beat ever since, for outlets ranging from *PC Magazine* (who?) to USAToday.com.

An earlier incarnation of the program aired on public TV stations in 1999 and 2000, without any PCW connection beyond Steve Manes's presence. We're proud to be part of this new-and-improved version.

Lots of TV about computers and related matters has come and gone over the years, but *PCWD2* isn't just another fluffy tech show. Like *PC World*, it's aimed at smart folks who want practical advice, not hype. "Everything's gone digital, and there's a need for people to try it out and tell you what you need and what's irrelevant," Steve says. "You're going to see two very personal takes on the new stuff that we think is important."

THE DUO IS IN: PCWD2 hosts Manes (left) and Gunn.

"For the most part, we're beyond being wowed," adds Angela. "So when we *are* wowed, you know it." One *PCWD2* fave rave: Scansoft's Dragon NaturallySpeaking voice-recognition software, which Steve enthuses about on the debut show and in this issue's *Full Disclosure* (page 178).

PC World's Digital Duo is produced by Incandescent Entertainment; Dennis Allen is the executive producer. See find.pcworld.com/48058 for a list of the 128 stations that have agreed to air it so far, or check your local TV listings.

Then again, the program plays on one nationwide venue 24/7: our own Web site. Head to www.pcworld.com/digitalduo to see the Duo in action.

I know, I know—watching TV on the Web is often a glitchy hassle. But we've worked overtime to make the *PCWD2* online experience a copasetic one.

For one thing, since almost nobody wants to watch a half-hour show on a PC, we've divvied each episode into concise chunks. And as long as you have the Flash Player installed, our clips won't send you into video player configuration hell or force you to play hopscotch between two windows. Even if you catch the show on TV, the site provides useful info such as PCW reviews, specs, and up-to-the-minute prices for products examined on each episode.

On the tube and online, "Two Analog People in a Digital World" is both the Duo's tagline and its mantra. As Steve puts it, "'Will this product really help you, or are you better off doing it the old way?' is always in the back of our minds."

For *PC World*, *PCWD2*'s TV and Web editions are new ways of helping you—and we think you'll like what you see. ■

Contact Editor in Chief Harry McCracken at mageditor@pcworld.com; read his blog at blogs.pcworld.com/techlog.

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PHOTOGRAPH: JANE WINSLOW

Wendy Vinzant
Graphic Designer

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16ms response	12ms response	1000:1 contrast ratio	1000:1 contrast ratio	vertical mode
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SAMSUNG

What's new and what's next in technology

NEWS & TRENDS

EDITED BY EDWARD N. ALBRO

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New Search Stars

WHAT'S THE TREND IN WEB SEARCH? NEWCOMERS AND SEARCH GIANTS COOK UP SPECIALTY SERVICES THAT GET YOU INFORMATION FASTER THAN EVER. BY LAURIANNE McLAUGHLIN

DO YOU SPEND too much time searching the Web? If you always consult the same search site, the answer is *yes*. Sometimes you need a specialist that will find only what you want, fast. A slew of new services, from search engine veterans and newcomers alike, are making specialization the hottest trend in Web search.

Among the new faces here, Become.com wants to be your favorite for shopping searches, and Answers.com aims to be your first stop for word definitions, technology explanations, biographies, and other reference information. Veteran search sites MSN Search and Yahoo have countered by debuting their own specialized tools, such as MSN's Near Me for local information and Yahoo's FareChase for travel deals. Even Google is getting into the act with products such as Google Maps that let you search smaller universes of data more efficiently.

ILLUSTRATION: RANDY LYHUS

The era of search engines trying to be all things to all people is over—partly because we have become smarter and pickier about search, observes Chris Sherman, associate editor at Search Engine Watch (www.searchenginewatch.com). "Specialized search is absolutely a trend we're going to see continue," he says.

Another reason for all the activity: For search companies, specialization helps sell more advertising and pump up profits. Search services benefit when they can con-

vince an advertiser that the right consumer is reading an ad at the right time—say, while shopping for an MP3 player or planning a vacation.

GOOGLE HOMES IN

FOR THOSE occasions when an ordinary Google search may not be the fastest path to the information you need, venture into Google Labs (labs.google.com) to find out what's cooking. Enter starting and ending addresses in Google Maps (maps.google.com), and you receive a 2D map along with driving directions and (in many instances) a zoomable satellite image of your destination (see **FIGURE 1**). You can use the site's satellite images to get a bird's-eye view of a possible vacation spot, too.

Satellite images have long been available at sites such as TerraServer (www.terraserver.com). But Google's images are only 2 to 18 months old, whereas satellite images on other sites are often several years old. In addition, Google has made it blissfully simple to get driving directions and then click a link to see a satellite photo of the destination.

Suppose you're looking for papers on a topic by a certain university professor: Typing his or her name along with a keyword into Google Scholar (scholar.google.com) yields more pertinent results than Google's main search page, which may return everything from local newspaper stories to results for a race the professor ran in 2002. (Note: Access to some of the site's information requires a subscription to a third-party service.)

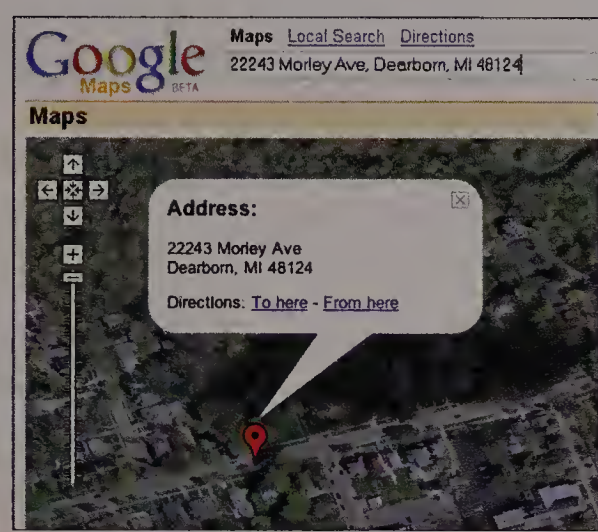


FIGURE 1: GET A BIRD'S-EYE VIEW of your destination, along with driving directions, by clicking a single link on the Google Maps site.

Unfortunately, not many people will find much value in the new Google Video (video.google.com)—yet. Though you might expect the service to search movie and TV files for video clips, it searches only for closed-caption text and still images from selected TV programs.

Gary Price, a librarian who operates the site ResourceShelf (www.resourceshelf.com), says that a great site for video searches is Blinkx.tv (www.blinkx.tv). The Blinkx service employs voice recognition to let you hunt for spoken words from the BBC, C-SPAN, Fox News, the History Channel, and other television news sources, and then view the corresponding video clips. The site also offers some searchable movie trailers and news radio sources—but not TV series, which are protected by restrictive licensing rules.

CHASING FARES

COUNTERING Google Scholar, Yahoo has added searches for information published via the Creative Commons licensing program that many academics and researchers use to publish online. More useful for nonacademics, however, is the company's FareChase site (farechase.yahoo.com) for travel searches; though ▶

NEW WEB GEMS

SEARCH SPECIALISTS

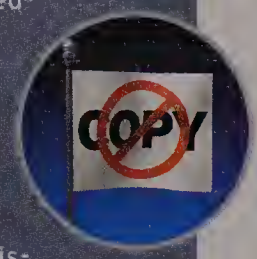
WHEN IT COMES TO homing in on your Web searches, these sites get you to the information you're looking for on the double.

SITE OR SERVICE	What's cool
Answers.com	The new question-and-answer site from GuruNet works really well for definitions, biographies, and explanations.
Become.com	Well-organized shopping search site gives not only current prices but also product reviews, owner forums, and other useful context.
Blinkx.tv	This video-search service allows searches of news-related video clips, movie trailers, and some radio programs.
FareChase (farechase.yahoo.com)	Yahoo's uncluttered travel search site doesn't make any sales pitches, and its search results are easy to refine.
Google Maps (maps.google.com)	The service delivers clear maps and relatively recent satellite images with one click. It's most useful for travel and vacation planning.
MSN Search Near Me (search.msn.com)	Microsoft's new local search component lets you simplify searches by asking for regional info only. Commerce-minded searches work best.

IN BRIEF

Tidbyte

FLAG LOWERED: In a major setback to Hollywood's efforts to control consumers' ability to copy digital TV content, a federal appeals court has ruled that the Federal Communications Commission lacked the authority to impose broadcast flag regulations scheduled to take effect this summer (see find.pcworld.com/48050). The broadcast flag is basically a signal attached to programming that contains info on what consumers may or may not do with that content. The FCC's regulation would have required digital TVs and other electronics sold after July 1 to recognize and respect the broadcast flag's copy controls.



Product Pipeline

SUPER WIRELESS: Sony's VAIO T Series notebooks are ultrawireless. The new VGN-T350 and VGN-T350P laptops are Bluetooth- and 802.11g-ready and connect to Cingular's Wireless National EDGE Network, which extends wireless coverage beyond LANs and hotspots. Cingular subscriptions cost either $50 (100MB monthly download limit) or $80 (with no limit) per month.

the service is still in beta testing, it's open for use.

Sites such as Expedia and Orbitz are packed with information, but they also sell trips. Not surprisingly, they sometimes stress choices based on their business deals—say, with a specific hotel chain—putting search results at the top of the list that may not be the best match with what you seek. FareChase doesn't sell travel. It helps you find information, and then sends you to the hotel, airline, or rental car site you choose to book your purchase. Its many search-refinement tools let you start by looking for hotels in Miami for a particular week, for example, and then narrow the results by area, star rating, price, or feature, such as "pets allowed."

Among MSN Search's new offerings, the Near Me feature for local information stands out, Search Engine Watch's Sherman says. Though MSN, AskJeeves, and Google Local tend to deliver about the same quality of results for local searches, MSN automatically tries to detect your location, using your IP address and other factors. For instance, MSN Search guessed that I was in Cambridge, Massachusetts (I'm actually about 30 minutes from there).

But beware: Local search can be hit-and-miss, since at a granular level today's search engines struggle to grab local data and keep it current.

Finding local businesses usually works well: Plug a city name and "pizza" into Google Local, and you'll see a list of restaurants as well as a good-looking map illustrating the location of each establishment. But if you try to find a map showing the site of a local high school, you may strike out. You are more likely to locate commerce-oriented information than other types.

ANSWERS.COM: NEW QUESTION KING?

WITH ITS Instant Answers feature, MSN Search (search.msn.com) wants to be your guru for quick questions, such as "Who was the fifteenth U.S. president?" (see **FIGURE 2**). The problem: Microsoft promotes data from its own properties—in this case, a profile of James Buchanan from its Encarta encyclopedia—in the links near the answer.

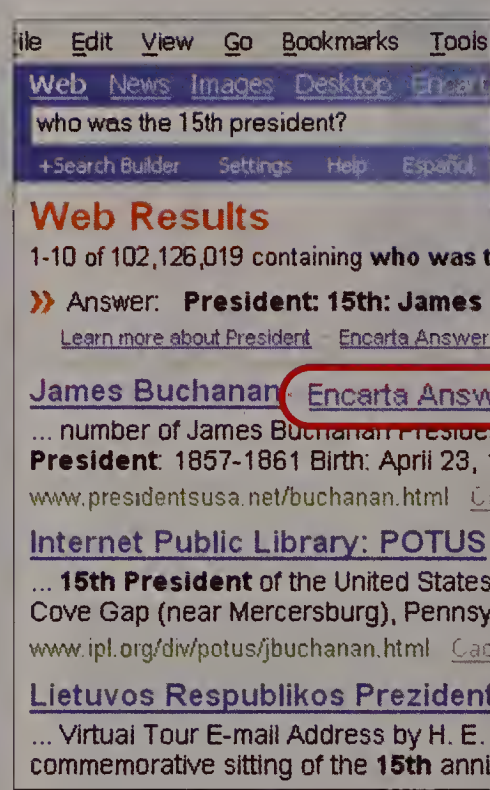


FIGURE 2: MSN SEARCH delivers answers to your questions with its search results—while also plugging links to its Encarta service.

Similarly, if you type the name of a performer or song into MSN Search to get links to some music samples, MSN Music appears at the top of the search results list.

More compelling is the new resource site Answers.com (www.answers.com), from GuruNet (www.guru.net). Designed as a thorough collection of reference information, it gives straight answers to questions, plus a few useful related links. Answers.com works quite well for a quick word definition, a biography, or an explanation of how something works.

Suppose that you've read an article mentioning OLED display technology and you want to know what "OLED" means. Type the term into Answers.com, and the site delivers a good definition of the technology, a discussion of its advantages and disadvantages, and a list of a few companies that use it—all arranged on one page, freeing you from having to click multiple results from Google.

Ask Jeeves (www.ask.com), however, remains the choice for such questions as "What's the current time in London?" (which the service will answer directly, without requiring you to click through to a results page). Type the same query into Answers.com, and you'll have to click through to one of several world clock pages.

A note to Ask Jeeves fans: It will soon be easier to find specialized information no matter where you may start on Ask.com. A revamped version of Ask Jeeves' Related Topics feature will appear this summer. Currently, Ask Jeeves suggests related topics for many Web searches. If you search for "digital cameras," for instance, the results will include links to camera reviews in a separate area. The new version will prominently offer to narrow your search to certain types of content: reviews, ratings, or how the products work, for example. It will also suggest results on allied topics (such as scanners and printers in this example) and, in some cases, names (such as pages about John Lennon when you enter "Paul McCartney").

SMARTER SHOPPING SEARCHES

SAY YOU'RE IN the market for a digital camera and want to do some prepurchase investigating online. Today you may go to a site such as Shopping.com, which features lots of sponsored listings and data fed directly from merchants. Become.com (www.become.com) offers a different approach. This beta search site crawls the Web for product-related information, including data from the product maker, magazine articles, links to online forums for product owners, and other useful nuggets. A team of editors then cleans up and organizes the results.

Sounds a bit like Google's Froogle shopping service, right? But while Froogle also crawls the Web, it emphasizes product specifications, prices, and sellers—not the broader context of reviews and forums that the new shopping site delivers. Search Become.com for "Canon PowerShot," for example, and you will receive plenty of helpful evaluations from a range of sources, along with links to online forums about the camera.

The beta Brilliant Shopper (www.brilliantshopper.com) also aggregates product info, but it has a much more cluttered look than Become.com.

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OPERATING SYSTEM

64-Bit Windows? Wait for Longhorn

THE NEW WINDOWS MOVES MANY PARTS OF XP TO 64 BITS, BUT SIGNIFICANT GAPS REMAIN.

AFTER MORE than 18 months of delays, the shipping version of Microsoft's Windows XP Professional X64 Edition operating system is finally here. But even if your PC has a 64-bit CPU, we advise waiting for Longhorn, Microsoft's next-generation Windows due out in 2006, unless you work with data-intensive programs such as video rendering, 3D animation, or CAD and engineering.

XP X64 can process data in 64-bit chunks and address a whopping 128GB of RAM (up from 4GB in today's systems), allowing a dramatic increase in performance by keeping most of the data an app might need in RAM rather than on the slower hard disk. It looks and acts much like the 32-bit version of XP, and these days more popular software either comes in a 64-bit version or works with the new OS. (For details on its features, see March's "XP Goes to 64 Bits," find.pcworld.com/48044). Caveats abound, however: Compatibility with existing hardware remains one trouble spot, and—more alarmingly—Microsoft says that installing the new OS will void your PC's warranty. Vendor policies vary on this, so check with your PC's maker before you upgrade.

Microsoft offers a free upgrade (see find.pcworld.com/48042) for users of XP Pro who purchased XP after March 31, 2003. But when you upgrade, you can no longer boot back into your 32-bit OS. Consider downloading a trial version of XP X64 from Microsoft (find.pcworld.com/48043) to make sure everything works properly before you switch for real.

MORE SOFTWARE

MICROSOFT has made headway with recalcitrant installers that plagued prerelease versions of X64, but many 32-bit apps—including some Microsoft products like the popular PowerToys for Windows XP—still balk at installing or running on XP X64. Also, some small features in XP X64 don't work as they do in 32-bit XP. For example, X64's Outlook Express can't check spelling.

One bright spot: 64-bit compatible antivirus packages are starting to appear. The 32-bit Symantec AntiVirus 10 Corporate Edition, for example, works just fine in XP X64.

The first applications written specifically for 64-bit systems will be for specialized professional markets, such as digital content creation and software development.

Another area where XP X64 is currently ahead of the game, so to speak, is gaming. Several 64-bit versions of popular game titles have already been released or are on the way, such as Atari's Shadow Ops Red Mercury, Epic Games' Unreal Tournament 2004, and Ubisoft's Far Cry. Eventually these and other 64-bit games will speed game play by completely loading large maps into memory and will offer more-detailed 3D environments.

HARDWARE HOLES

ALTHOUGH XP X64 ships with more than 15,000 drivers—a greater number than any previous Windows version did—and even more are available via Windows Update and third-party developers, many drivers aren't available and perhaps never will be. Such consumer goods as MP3 players (including the Ipod) and some scanners lack drivers; graphics cards and various mass storage devices are better supported. Check Microsoft's hardware compatibility list before you switch; the list will be at www.windowsmarketplace.com.

Microsoft says that the transition to a 64-bit desktop OS will take a few years, and that 64-bit computing will be mainstream only with Longhorn.

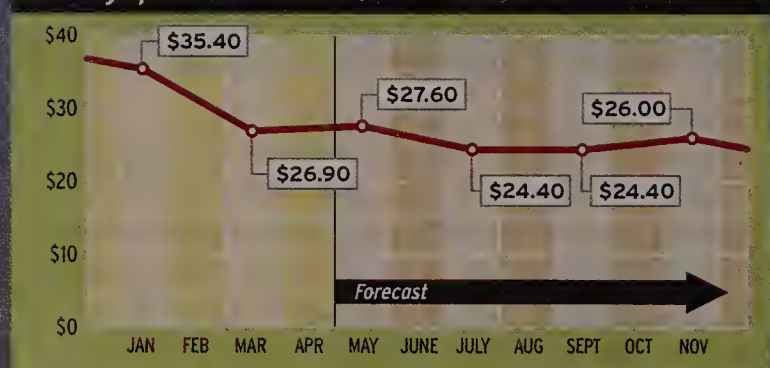
We advise you to hold off on XP X64 but to consider 64-bit hardware—especially PCs that can address 8GB or more of RAM—when it comes time to buy your next system. That way, you can adopt XP X64—or more likely a 64-bit Longhorn OS—down the road.

—*Paul Thurrott*

IN BRIEF

Falling Memory Prices

IF YOU WANT TO upgrade your system's memory, now may be the time to act. Prices of RAM should bottom out this summer before inching up this fall, according to research firm IDC.



*Price that computer manufacturer would pay for 256MB of DDR400 DIMM; month by month in 2005.

SOURCE: IDC, MAY 2005

ILLUSTRATION: RANDY LYHUS

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CONSUMER ALERT

Can You Trust Your Spyware Protection?

WHY YOUR SPYWARE SCANNER MAY NOT CATCH SOME ADWARE PROGRAMS.

THE NEXT TIME you run a scan with your anti-spyware tool, it might miss some programs. Several anti-spyware firms, including Aluria, Lavasoft, and PestPatrol, have quietly stopped detecting adware from companies like Claria and WhenU—a process called delisting. Those adware companies have been petitioning anti-spyware firms to delist their software; other companies have resorted to sending cease-and-desist letters that threaten legal action.

In most cases it's difficult for customers to determine whether their anti-spyware tool has delisted anything and, if so, which adware it skips.

"When a spyware program gets delisted, users won't be aware of its presence," says Harvard law student and spyware researcher Ben Edelman. The practice, he says, "offers spyware makers a new lease on life, letting them keep users who otherwise would have removed their software."

DEGREES OF SPYWARE

OF COURSE, SOME spyware apps are worse than others. One spyware program may make severe changes to your computer's settings, while another merely displays ads.

Claria and WhenU are making the case that their adware programs don't resort to illegal tactics, such as exploiting security holes, to install themselves. And though this software can be annoying, adware developers argue that merely being listed in an anti-spyware scanner's database tarnishes a company's reputation by linking its relatively benign adware application with far more harmful and intrusive spyware programs.

According to Avi Naider of WhenU, though some other adware companies will track your Web meanderings and sell that data, WhenU's privacy policy doesn't permit it to track the search queries that users type or the Web pages that they browse.

Each anti-spyware firm uses its own set of criteria to decide whether to remove or detect a file or Registry key related to spyware. Usually even a few bad behaviors suffice to red-tag a file as spyware or adware.

Peter Mackow of PCTools, maker of the Spyware Doctor anti-spyware program, says that his company won't publish the entire list of its criteria for fear that spyware companies will use the information to design a spyware application that skirts every rule. That is a position shared by many others who fight spyware.

> 'When a spyware program gets delisted, users won't be aware of its presence.'
>
> –Ben Edelman
> *Spyware researcher*

"The spyware guys want a really rigid set of rules defining spyware so they can then make an end run around [all of them]," says Eric L. Howes, who tracks the spyware business for Spywarewarrior.com and consults for anti-spyware software companies.

Experts recommend that you employ two—or even three—anti-spyware tools. The more you use, the likelier they are to counter the individual biases of each anti-spyware company.

TO DELIST OR NOT

IT'S UNFAIR TO permanently blacklist a company based on its past behavior, so some delisting is inevitable. But delisting an adware application is a dangerous proposition for anti-spyware developers. In the past, some spyware and adware makers have changed their software enough to get delisted only to resume the activity that got them flagged in the first place.

As a result, the anti-spyware industry has developed a thick skin. Delisting is rare because, Edelman says, anti-spyware firms "stand up to strongly worded demand letters."

Adware companies also decry the word *spyware* itself as inherently negative, so some anti-spyware firms have tried to create terms that mean essentially the same thing, using more-neutral language: *grayware, potentially unwanted programs,* or *potentially unwanted software.* But Webroot's CEO David Moll argues that matters could get more confusing if the anti-spyware companies try to refer to spyware by other names, just when many people are beginning to understand what spyware can do.

—*Andrew Brandt*

PHOTOGRAPH: ANDREW BRANDT

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PROCESSORS

Dual-Core Duel: AMD Beats Intel

FIRST LOOK: TWO PROCESSORS IN ONE ATHLON CHIP GIVE PERFORMANCE EXTRA OOMPH.

READY FOR THE era of dual-core? You now have a choice of dual-core processors; and based on *PC World* tests, the winner is clearly AMD's new Athlon 64 X2, which handily outdistanced a dual-core Intel system we tested last month (see find.pcworld.com/48040).

Our tests indicate that with both AMD's and Intel's dual-core chips you'll obtain the biggest performance benefit when you work with multiple applications at once or when you use multithreaded software, designed to recognize more than one processor.

Dual-core chips build in two processing cores, in effect giving you two CPUs in a single piece of silicon. You also get two L2 memory caches, one for each core; the 2.4-GHz Athlon 64 X2 4800+ chip that we tested, for example, had 1MB of L2 cache per core. The 64-bit Athlon 64 X2 chips ship in June, joining currently available dual-core Opteron server and workstation CPUs.

PCs with the new chips, which will come in several variations, should be available now. Also, you should be able to upgrade your existing Athlon 64 PC to the new chips with just a BIOS change, whereas to convert an Intel unit to dual-core you'll need to purchase a new motherboard.

SPEED BOOST

WE TESTED A reference system provided by AMD that ran Windows XP Pro. It came configured with 1GB of 400-MHz DDR memory; a 10,000-rpm, 74GB hard disk; and an NVidia GeForce 6800 Ultra graphics card with 256MB of DDR3 RAM. (The Intel system we previously tested came with comparable hardware.)

The AMD machine was the second-fastest we've ever tested, with a 116 mark on WorldBench 5, easily surpassing the 95 posted by the 3.2-GHz dual-core Pentium Extreme Edition 840 reference system that we looked at earlier (see the chart below; and go to find.pcworld.com/48046 for more results).

The unit showed its prowess on the multitasking portion of WorldBench 5. Its time of 6 minutes, 44 seconds was an impressive 3 minutes, 42 seconds faster than the average of two Athlon 64 FX-55 systems, and about 3 minutes faster than the dual-core Pentium EE 840 reference PC's time.

If you want one of these powerful beasts, you'll have to pay dearly for it: AMD's 4800+ chips alone are priced at $1001 each in quantities of 1000, while Intel's 3.2-GHz Pentium EE 840 chips currently sell for $995. Entry-level Athlon X2 chips will cost only about half that much, however, so you can still get the benefits of 64-bit technology and dual-core processing without breaking the bank.

Intel devotees should also observe dual-core Pentium D–based systems arriving about the time you read this, and such PCs should be considerably less expensive than those with the Pentium EE 840.

—*Anush Yegyazarian*

TEST REPORT

PC WITH AMD'S DUAL-CORE CHIP BESTS INTEL'S SYSTEM

COMPARED WITH THE PENTIUM dual-core PC, the Athlon unit scored very well in the multitasking and Windows Media Encoder tests.

PROCESSOR	WorldBench 5 score (Faster)	TIME (IN SECONDS) TO RUN					
		Windows Media Encoder 9	Roxio VideoWave 1.5	Multitasking test[1]	Ahead Nero Express 6.0	Adobe Photoshop 7.0.1	Adobe Premiere 6.5
2.4-GHz Athlon 64 X2 4800+	**116**	**256**	**246**	**404**	**437**	301	**344**
3.2-GHz Pentium EE 840 (dual-core)	95	340	274	590	457	357	479
3.73-GHz Pentium 4 EE	102	338	269	581	477	331	441
Average of two 2.6-GHz Athlon 64 FX-55[2]	107	355	297	626	494	**299**	367

TEST Center **FOOTNOTES:** [1]In the multitasking test, systems load various Web pages while encoding video with Windows Media Encoder. [2]Average of previously tested systems. **HOW WE TEST:** All systems were tested with WorldBench 5 and ran Windows XP; for test details see www.worldbench.com. Application tests are part of WorldBench 5. All rights reserved. We used reference systems from AMD and Intel for the dual-core tests and for the 3.73-GHz Pentium 4 EE test. Intel-based PCs were tested with Hyper-Threading on. **CHART NOTES:** For WorldBench 5, higher is better; elsewhere, lower is better. Bold denotes best score. Systems in italics are comparison units.

ILLUSTRATION: RANDY LYHUS

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PLUGGED IN

STEVE FOX

Systems That Boot in a Flash

PLUS: GRASSROOTS NEWS AND VIDEO OUTLETS SPRING UP ON THE NET.

FLASHY NOTEBOOK HARD DRIVES

The Buzz: All of that schlepping and bouncing takes a toll on notebook hard drives, which break far more frequently than other laptop components. To improve reliability, Samsung and Microsoft have collaborated in designing a hybrid hard drive (HHD) that houses 1GB of flash memory along with the usual spinning platter. High-performance flash memory (which has no moving parts) caches data to be written to the drive, so that the fragile disk platter doesn't have to spin up nearly as often. This approach will shorten boot time, save wear and tear, and extend battery life by about 36 minutes on a 4-hour battery. Sound too good to be true? It is—at least for now. HHDs are designed to work specifically with Microsoft's Longhorn operating system, which isn't due until the second half of 2006. You can expect several vendors to offer the new drives then.

Bottom Line: Microsoft really wants you to buy Longhorn when it shows up. Here's one good reason to do so.

GRASSROOTS NEWS

The Buzz: Whether it comes from dissidents in Iran or activist bloggers in the United States, Net-based news from just-plain-folks reporters has emerged as a viable alternative to the standard news outlets. Instead of simply bashing the established media, citizen journalists are working to supplant—or at least supplement—them. For would-be journalists who'd rather not go it alone, grassroots sites like AFreePress.com and NowPublic.com lay the groundwork for communal news services.

Bottom Line: This old-media hack welcomes the competition. There's nothing sacred about traditional news sources (except *Plugged In*, natch).

VIDEO A LA NET

The Buzz: Thanks to ubiquitous broadband and sophisticated production and delivery technologies, the amateur video you produce can now reach a mass audience. ParticipatoryCulture.org is building open-source tools that will allow anyone to publish video to a channel that users can subscribe to—sort of an ITunes for video. OurMedia.org has partnered with the Internet Archive, Creative Commons, and a hosting service called Bryght to offer free storage and bandwidth for video, photos, audio, and more. Users of Popcast.com's Flash-based "Open Access Internet TV" can broadcast video channels to Popcast, where people can subscribe to them. Meanwhile, Yahoo's Media RSS, a tool for self-publishing rich media, launched recently (find.pcworld.com/48084). And Google has a beta of a hosting service (upload.video.google.com) that will enable you to distribute—and even charge for—your videos.

Bottom Line: TV as we know it is dead. The networks just don't know it yet. ■

Contact PC World *Contributing Editor Steve Fox at steve_fox@pcworld.com; visit find.pcworld.com/31643 to read additional* Plugged In *columns.*

HERE\NOW

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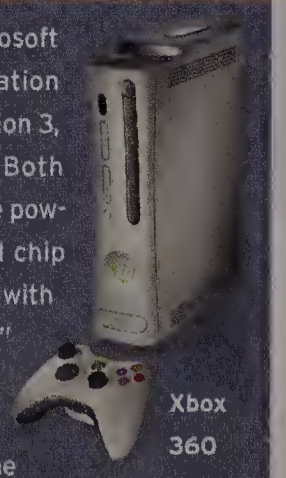
5 **YAHOO MUSIC** Portable music subscription priced at $5 per month. music.yahoo.com/unlimited

COMING TECH

Battling Game Consoles

GAME MACHINES are going hi-def as Microsoft and Sony get set to put their next-generation game consoles, the Xbox 360 and PlayStation 3, respectively, into users' twitchy hands. Both devices are all about speed. The Xbox will be powered by a three-core IBM PowerPC-based chip running at 3.2 GHz per core; Sony is going with the "Cell" CPU, a "supercomputer on a chip" running at 3.2 GHz. Expect plenty of RAM and enhanced graphics on both boxes, and support for high-capacity Blu-ray discs on the PS3. The Xbox 360 should debut in time for the holiday season. The PS3, as well as Nintendo's Revolution, will arrive next year.



Xbox 360

ILLUSTRATIONS: GORDON STUDER

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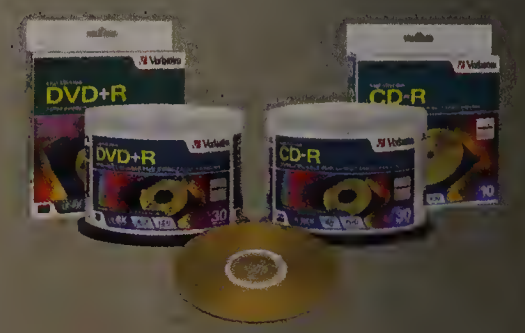

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NEW DATA ON DRIVE DESIGN

PC COMPONENTS: MORE, PLEASE

REMEMBER TECH SUPPORT

CAN WE LEARN FROM APPLE?

ANNE KANDRA'S May *Consumer Watch* ["What Can PC Makers Learn From Apple?"] was well done—until I got to this line about home media centers: "Which would you rather buy: a sleek device that you could design your living room around or a clunky box that's more about spreadsheets than Sade?" Who would design a room around an electronic device? Yes, coming out of the factory, Macs look smoother, but you can't modify the case later, last I checked. A PC, on the other hand, can be designed just about any way you want it; and if you do it right, it can blend in seamlessly with the other electronics in a room. Now doesn't designing a computer around your living room sound like a much simpler idea?

Tom Townsend, Orlando, Florida

I HAVE ALWAYS been a PC user, but I've read about the reliability and stability of Apple's systems, not to mention their awesome good looks. If PC makers could incorporate these virtues into PCs and if Microsoft could spend more time on software stability and ease of use instead of rushing products to market, the world would indeed be a better place.

Joe Stelzer, Delaware, Ohio

KANDRA'S ARTICLE on the Mac Mini was obviously written by a city dweller. She omits the major reasons Macs don't sell, and are almost never used anymore, in rural areas:

- Apple's parts have very high prices, and Apple sells only to large dealers in cities.
- Apple doesn't offer good service information on its peculiar hardware and cases.
- Many builders prefer "white box" PCs, as they are the easiest to build and repair and are the best value for rural users.
- Linux, in my opinion, is the best alternative to the Mac and runs on much cheaper hardware.

Alan Hale, Central Nevada

APPS: AN ALTERNATIVE AND AN ADD-ON

IN THE "Office Assistants" section of the article "Supercharge Your Software" [May], Rick Scott recommends paying $50 for an add-on program to obtain something that has always been a part of WordPerfect: the Reveal Codes feature.

Three times now I have tried to switch to Word, and each time I've been so frustrated with not having access to formatting codes that I have given in and purchased a WordPerfect update. When is Microsoft going to learn?

Carol Campbell, Truro, Nova Scotia

YOUR ARTICLE INCLUDES many handy utilities. However, the "Windows Wonders" section omitted one key item: an easy way to control programs that want to autostart with Windows. With spyware and worms running rampant, people need some way to disable or delete unwanted startup applications. Msconfig works okay, but it isn't available in all versions of Windows. My preferred solution is to use Mike Lin's Startup Control Panel [downloadable from find.pcworld.com/46260]. It's free, and I have used it many times to "delouse" infected machines.

Mike Barnard, via the Internet

WIDE-SCREEN MINUSES

REGARDING THE May Spotlight on wide-screen notebooks ["A Walk on the Wide Side"]: I own a 17-inch HP notebook, and the screen size is a neat feature, but the machine is far too heavy to lug around. With its 3-GHz processor, it gets hot, too, which means it's not so comfortable on the lap. I have a tablet computer as well, and that is the best for portability. Unlike the wide-screen laptop, which weighs over 9 pounds, the tablet model is a light 3-plus pounds. Finally, due to their width, 17-inch notebook screens are relatively flexible—and thus more easily damaged.

Ron Jones, via the Internet

PERPENDICULAR RECORDING: IDEA GOES WAY BACK

IT WAS A GREAT satisfaction to me to see, in May's "PC Drive Reaches 500GB" [*News and Trends*], that vertical [perpendicular] particle orientation has finally made it into practice for data recording.

About 1978–1980, when I was consulting for Ampex, I suggested doing some work in that area. Previously, as a surface chemist with ten years at Memorex (including time spent as the manager of ▶

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VISIT www.pcworld.com/pcwinput and rate this issue—you could win a $500 gift certificate from Amazon.com. You'll need to provide the subscriber number from your mailing label to take this survey online. The site explains the official rules and also describes how you can participate in the drawing if you're not a *PC World* subscriber.

PHOTOGRAPH: MARC SIMON

research in the tape plant), I had explored the requirements of vertical alignment and the spacing necessary for preventing particles from interfering with each other. Most engineers at that time just laughed at the idea as impossible.

Gunther Steinberg
Portola Valley, California

MOTHERBOARDS: JUST THE BEGINNING?

YOUR ARTICLE ON motherboards ["Battle of the Boards," May] was great! It was exactly what I was looking for, as I am ready to build and have had a hard time evaluating the new boards.

Jill Bradwell, Goldendale, Washington

THE MOTHERBOARDS article was very well written; now it needs to be followed up with the same in-depth look at CPUs, power supplies, and PC cooling. One article on each of these topics, please.

William Birch, Bolingbrook, Illinois

DO IT YOURSELF? ONE CAUTION

HARRY MCCRACKEN'S editorial on building your own PC [*Up Front*, May] points out a great alternative to the prefab models available from PC vendors and retail stores. However, it ignores one important factor in owning a PC: technical support.

As the go-to guy for countless friends and relatives on the verge of a PC purchase, I've always suggested the vendors who—in *PC World*'s research—receive high marks for support, and I've advocated buying a three-year warranty to boot.

Do-it-yourselfers will receive no such safety net. And the money saved may pale when the spanking-new box produces a funny smell during its initial boot.

Michael Spanjar, Milwaukee

TIMELY ALERT

I JUST RECEIVED my first issue of *PC World* (April 2005). Stuart Johnston's *Bugs and Fixes* column alerted me that my version of Eudora might be flawed. I indeed had the vulnerable version and immediately downloaded the upgrade—which, had I waited much longer, I would have had to pay for. So you saved me $40 and made my Eudora safer. I'm delighted.

Kristy Schnabel, via the Internet

PC World *welcomes letters to the editor. We reserve the right to edit for length and clarity. Send e-mail to letters@pcworld.com.* ■

CORRECTIONS

IN MAY'S "Inbox Tamers," the chart on page 80 should have said that Google's Gmail at 2GB of storage is free. In addition, Yahoo Mail, starting in April, increased its free storage to 1GB.

In May's "Battle of the Boards," the charts on pages 102 and 110 should have listed the Intel motherboard as the Intel D915PBL.

PC World regrets the errors.

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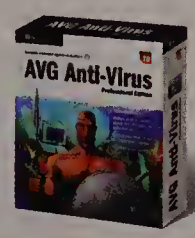

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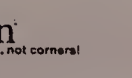

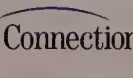

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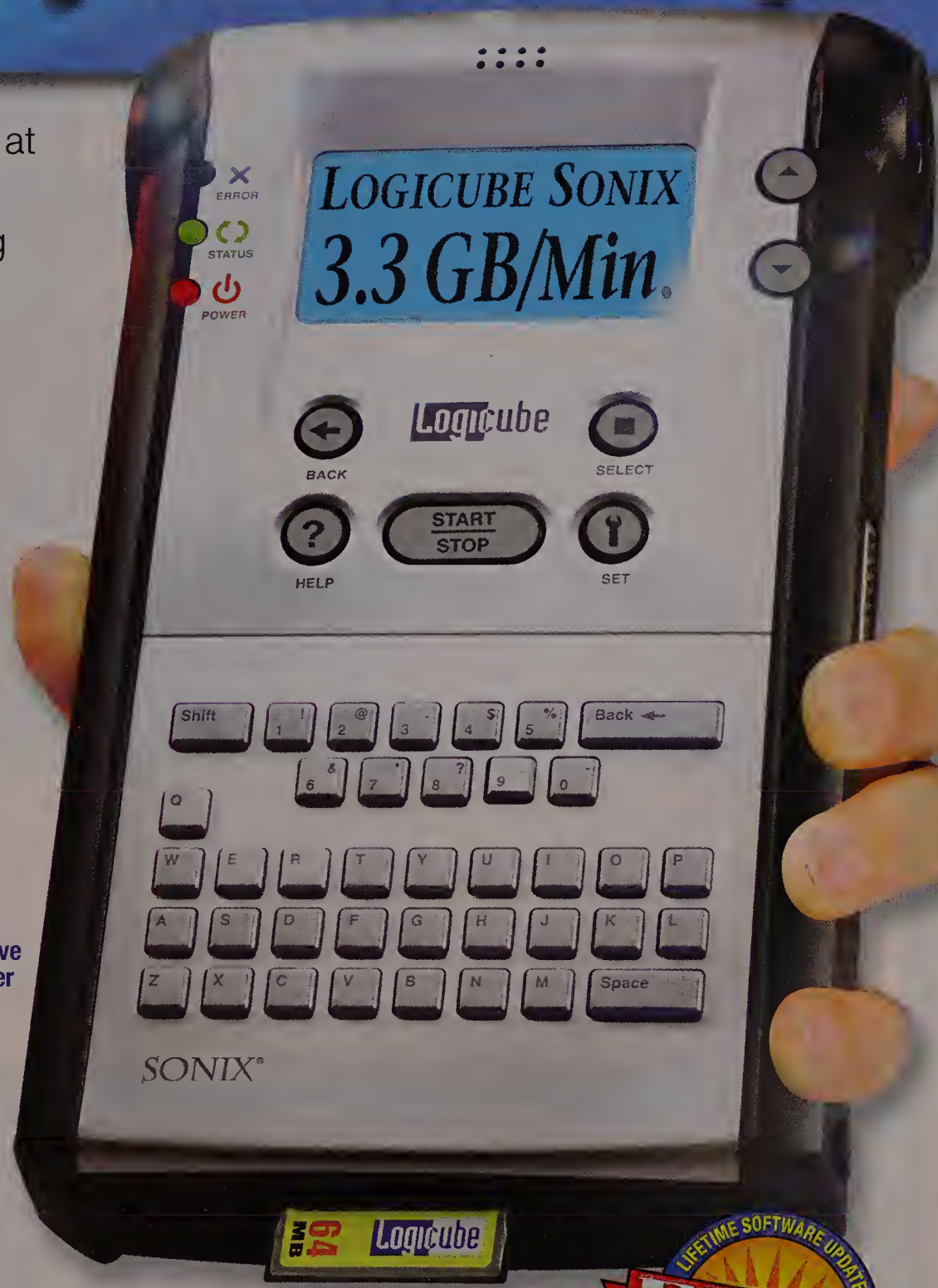

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ANNE KANDRA

END-USER LICENSE AGREEMENT REFORM

PRIVACY WATCH: KEEP NON-IE BROWSERS SAFE

ON YOUR SIDE: FREE MONEY HAS A PRICE

Software Licenses: Fight for Your Rights

Companies want to legislate user agreements—and that's bad news for you.

ILLUSTRATION: DAVID PLUNKERT

WOULD YOU BUY a toaster if there was a chance it might not work properly when you got it home? Well, probably. After all, anyone could end up with a dud.

But what if the toaster's maker—let's call it Toastersoft—denied any responsibility for the product's problems, defects, or hazards, even if it knew they existed?

Suppose Toastersoft asked you to promise not to try to fix the toaster on your own, instead offering to sell you advice at $35 a pop. Your contract also stipulated that once you bought it, the toaster could not be sold, lent, or given away to anyone, nor could you complain publicly about any problems. Plus, Toastersoft might have conveniently neglected to disclose these rules until after making sure you'd paid for—and couldn't return—the item.

Would you do business with anyone under those terms? You probably already have: That's the way many companies sell their software today. Although few software companies include all of these provisions in one end-user license agreement (EULA), each condition of sale or use has appeared in some kind of software license. Simply by installing a new piece of software, you could be agreeing to many of these stipulations. In the case of freeware and shareware, in particular, installing the program may mean installing a piece of adware or spyware—a compelling reason to read the EULA.

Granted, it's unlikely that some software company is going to sue you for tinkering with its code or griping to a coworker about its product. But if installing the software obligates you not to do these things, don't you want to know about it? That's why it's important to understand what's in those EULAs we accept—and to let companies know if we don't like their terms. All the while, a battle rages behind the scenes: The software industry is pushing legislation to freeze your rights, and consumers are fighting back to reform the license agreement situation.

YOUR RIGHTS TODAY

COMPANIES DO TELL you about these rules. In fact, they spell them out in mind-numbing detail in their EULAs—those 46 screens of solid gray text you scroll through to reach the "I Agree" button.

EULAs vary considerably from company to company and from product to product. According to Microsoft's Windows XP EULA, for example, the company isn't responsible if the software wreaks havoc with your PC, even if Microsoft knew in advance about the problems. And Autodesk's EULA for its AutoCAD program says that if you file for bankruptcy, you lose your license to the software.

You do read your agreements, don't you? Sure you do. Right after you visit the courthouse to volunteer for jury duty and finish brushing your dog's teeth. ▶

The problem isn't just that the devilish details are buried in lines and lines of impenetrable legalese. Sometimes you can't even see the EULA until after you have opened the shrink-wrapped box and nearly finished installing the software.

COMPANIES' FREE-FOR-ALL

HOW DO VENDORS get away with setting such skewed rules? Simple: because they can. Since federal legislation designed to govern transactions on digital products doesn't yet exist, vendors call the shots.

And the software industry wants things to stay that way. In 2000, the proposed Uniform Computer Information Transactions Act was introduced (find.pcworld.com/47742). Backed almost exclusively by software companies (including Microsoft and AOL) and industry groups, UCITA attempts to establish a national standard for the contracts used in the sale of digital information. Its proponents argue that it will keep costs down for consumers.

One UCITA opponent, Ed Foster of Gripelog, a consumer advocacy site (at find.pcworld.com/47748), sardonically describes the bill as a "freedom of contract": Basically, the software vendors can get away with whatever they want, as long as they mention it in the EULA.

UCITA has been opposed by at least 32 state attorneys general, the Federal Trade Commission, and virtually every consumer advocacy group that has studied it. It has even spawned several anti-UCITA organizations, including Americans for Fair Electronic Commerce Transactions (AFFECT, www.ucita.com). To date, state laws based on the UCITA model have passed in only two states—Maryland and Virginia—and few lawmakers expect it to be enacted elsewhere anytime soon.

> Vendors can get away with whatever they want, as long as it's in the license.

Most experts consider UCITA to be all but dead, but it could be a sleeping giant. Miriam Nisbet, legislative counsel for the American Library Association and president of AFFECT, explains, "All it would take is for someone, perhaps with [a vested] interest in the software industry, to present it [again], arguing that legislation covering digital products is long overdue."

THINK BEFORE YOU CLICK

HOW CAN YOU protect your rights when buying software? Start by being informed. AFFECT has launched a campaign called Stop Before You Click (www.fairterms.org). The program promotes what it calls the 12 Principles for Fair Commerce in Software and Other Digital Products (find.pcworld.com/47744). Ultimately, AFFECT's goal is not only to raise consumer awareness of unfair user terms, but also to help develop better laws.

So to avoid the pitfalls that EULAs present, before you buy a given product, try to shop around for the most consumer-friendly agreement: Check the companies' Web sites and read the associated EULAs, if available (Adobe and Symantec, for example, post EULAs prominently on their sites). Also, once you have the product in hand, you must read those license agreements closely. For instance, look for an "automatic renewal" clause: You sign up to try out a piece of soft- ▶

PRIVACY WATCH

Browser Alternatives Are No Guarantee of Security

IF YOU USE AN alternative browser—Firefox, Opera, Mozilla, or anything not named Internet Explorer—you may be feeling pretty smug these days. Every time you hear about another patch for IE or about another way hackers use that browser to attack unsuspecting Web users, you think to yourself, "I don't have to worry."

Well, think again. The fact is, alternatives like Firefox have security problems of their own. And even if you don't use Internet Explorer for your everyday browsing, you still have to keep it patched: Those ever-creative hackers have found ways to enter your system through Firefox, and then exploit IE.

If you grabbed your copy of Firefox or Mozilla a few months ago, you're at risk. Programmers have discovered at least 28 holes in Firefox since January 1. The Mozilla browser shared 27 of those problems with Firefox (go to www.mozilla.org/security for details). You must install a new copy of the browser. Use Secunia's tool at find.pcworld.com/47818 to see whether your browser is vulnerable.

The right piece of malware could trigger older versions of Mozilla or Firefox to launch programs at will or to read data from the browser cache out of memory, threatening your privacy by exposing your browser history, search queries, and possibly passwords.

Opera has released security fixes this year, too, though fewer than Mozilla and Firefox. Get more details at find.pcworld.com/47819.

Merely patching your alternative browser isn't enough. Security researchers recently discovered an exploit that uses the browser plug-in Java to worm its way through Firefox to get to IE. It then uses IE to launch a blizzard of pop-ups.

That means you have to keep up-to-date on all those IE fixes you thought you could ignore. And you have to make sure that any browser add-ons such as Java are secure. (If you don't know which version of Java you have, head to find.pcworld.com/47821; and pick up the latest version from Sun at find.pcworld.com/47822.)

It's tempting to think that using an alternative browser is like going back to the early days of the Web, when you didn't have to worry about safety. Sadly, those days seem to be gone forever.

—Andrew Brandt

ILLUSTRATION: MARK MATCHO

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ON YOUR SIDE

Hidden Costs of Dell's $4 Gift Check

I PAID OFF my Dell Dimension 4100 through Dell Financial Services, then received a check for $4 from Dell. Thinking I'd overpaid, I cashed the check. But my next credit card statement included a charge for $139.95. I called Dell and learned that by cashing the check I had set up a DealPass account, which offers discounts on products from other retailers. DealPass never notified me of my new membership. I don't want this service, and I feel like I've been betrayed by Dell. How can I get my money back?

Patty McIntire, Lansdale, Pennsylvania

On Your Side responds: Dell told me that Dell Financial Services had teamed with DealPass, which sells memberships offering discounts at certain retail stores and services. To promote it, Dell Financial Services sent checks to Dell customers. People who cash the checks receive a 30-day free DealPass membership; then, if they don't cancel, their Dell account is charged $139.95 for a year's dues. Dell says that it included details of the agreement on McIntire's check; but it issued her a full refund anyway. *PC World*'s advice: Beware of "free" money.

–Stephanie Layton

ware, and the next thing you know, you're being billed regularly for it—a provision that was buried in the agreement.

If you'd rather disable your spam filter for a week than slog through an entire EULA, try to target the most important points, as outlined in AFFECT's 12 Principles. Also, the Electronic Frontier Foundation's Web site (find.pcworld.com/47746) includes a guide to dangerous terms found in EULAs. Sites like Bad Software (find.pcworld.com/47750) and Ed Foster's above-mentioned Gripelog offer EULA reviews and forums, legal analysis, and legislative updates, as well as opportunities to get involved and help others understand EULA issues.

When it comes to software products, we all want better protection. But fair legislation will happen only when we consumers become more assertive about what we will and won't accept. After all, you can return a flaky toaster without any major hassles—why not flaky software? ■

Anne Kandra is a contributing editor, Andrew Brandt is a senior associate editor, and Stephanie Layton is an editorial assistant for PC World. *You can address e-mail to them at consumerwatch@pcworld.com. To read previously published* Consumer Watch, Privacy Watch, *or* On Your Side *columns, visit find.pcworld.com/31703, find.pcworld.com/31706, or find.pcworld.com/31709, respectively.*

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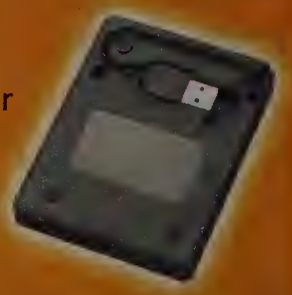

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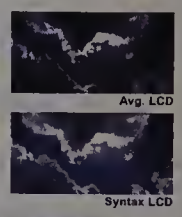

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HASSLE-FREE PC

STEVE BASS

Cheap and Easy Internet Phone Calls

Why sign up for a complex service when you can just test the online waters?

RING...RING. HELLO? It's me—and I'm making a crystal-clear Internet call using Skype's slick software. It's not going to replace your regular phone, but it's great for cheap calls to your buddy overseas.

HELLO, WATSON

The Hassle: I want a simple way to make an occasional phone call over the Internet. I don't want to replace my landline and lose access to 911. Nor do I want to spend time sifting through complex offerings from myriad Internet phone companies.

The Fix: With all the talk about Internet calling services like Vonage and AT&T's CallVantage, you might have overlooked my favorite option, Skype, which has been around for a couple of years. Using Skype is much like using instant messaging. (In fact, IM features are built in.) Click a name in your contact list, and your PC rings your contact's phone. Once that person picks up, start blabbing. It's free to call anybody, anywhere, who has Skype installed. You and your friend will need a broadband connection for Skype to work well. Download it at find.pcworld.com/47724.

Skype has lots more going for it, too: The program is incredibly easy to set up and use, the sound quality is great, and unlike with Vonage there are no monthly fees. In fact, in the United States, you avoid all taxes and pesky regulatory fees. And for a small charge, you can obtain various landline-like features from Skype. For example, SkypeOut allows you to call any landline or cell phone. You pay only about 2.5 cents a minute for SkypeOut calls. I spent 12 cents using SkypeOut to arrange for a hotel reservation in Buenos Aires. SkypeOut's rates are on a par with those of other VoIP and landline services.

HASSLE-FREE SKYPE

HERE ARE A FEW handy Skype tricks to try.

- Tired of endless bandwidth-wasting calls from strangers? Open the program, click *Tools•Options•Privacy*, and select *only people from my Contact lists can call.*
- Link up to five folks in a conference call. (Click *Tools•Create a Conference.*) To add more, have participants invite people.
- Use a $10 PC Headset Speaker Switch from Plantronics to swap the sound output from your speakers to your headset.

For more tips, see Michael Gough's Skype page (find.pcworld.com/47672).

HARDWARE HOOK-UPS

The Hassle: I'm ready to make calls, but I don't like headsets, and I want the whole rig to act like a normal phone instead of like some high-school science project.

The Fix: Having the right hardware makes Skype even easier to use. Connect any regular or cordless phone to the $45 Actiontec Internet Phone Wizard, and make calls with Skype or any other VoIP service. The Actiontec distinguishes between incoming VoIP and landline calls; it also lets you make outgoing calls using either type of service. If you can't take a call, the device sends Skype messages to your existing answering machine. Get details at find.pcworld.com/47682. ■

Contributing Editor Steve Bass is the author of PC Annoyances, *published by O'Reilly (see find.pcworld.com/43818). Contact him at hasslefreepc@pcworld.com.*

TOOL OF THE MONTH

Exterminate Stubborn Files

HAVE YOU EVER TRIED to delete a file or folder, only to get a Windows error message saying no can do? Maybe you're having a bad hair day, but more likely some program is using the file. Try downloading ForceDel, a utility that works with all Windows versions to force-delete the stubborn file. Still stuck? If you're using Windows 2000 or XP, download and install WhoLockMe. This tool shows which Windows process is locking the file. One click kills the process—a virus, a Trojan horse, spyware, or (as in my case) a dialog box enhancer—after which you can delete the tenacious hanger-on. Download both files at find.pcworld.com/47728.

ILLUSTRATION: CHRISTOPH NIEMANN

Shuttle®

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Shuttle XPC systems deliver all the performance and features of traditional tower PC's in a fraction of the space. Available with the latest processor and video card technology, the Shuttle XPC shatters the myth that "bigger is better".

Shuttle recommends Microsoft® Windows® XP

FREE	Graphics Upgrade to NVIDIA® GeForce™ 6800GT 256MB ($200 value)	starting at **$1749***

Model	Shuttle XPC P 2500g
Processor	AMD Athlon™ 64 3500+ HyperTransport 939-pin
Operating System	Microsoft® Windows® XP Home Edition
Main memory	512MB Kingston® HyperX PC3200 DDR400 Dual Channel
Graphics	NVIDIA® GeForce™ 6800GT 256MB PCI Express x16
Hard drive	200GB 7200RPM Serial ATA
Optical drive	52X CDRW/16X DVD Combo drive
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Dimensions (L x W x H)	12.6 x 8.26 x 8.66 (in); 320 x 210 x 220 (mm)

* monitor not included

P 2500g

1 888 XPC 1818 | www.us.shuttle.com | find xpc at > BestBuy | Sam's Club | MicroCenter | Walmart.com

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Patch New Cracks in Microsoft Software

Critical flaws fixed in Word, Internet Explorer, MSN Messenger, and more.

MICROSOFT HAS released patches that block critical vulnerabilities in Internet Explorer 6, Windows 2000 through XP Service Pack 1, Word 2000 through 2003, Works Suite 2001 through 2004, and MSN Messenger 6.2. Worst case, these holes could allow a perpetrator to control your PC.

In Internet Explorer, for example, if you click a booby-trapped link on an attacker's site, one of the browser's flaws could let a bad guy send you a rigged Dynamic HTML object such as an animation with synchronized music. The object would deliberately overload IE, causing the audio and animation to get out of sync inside the browser, at which point an attack program would load from the remote site.

Another IE hole involves the way the browser processes some Web addresses. If you click a corrupt link on a cracker's site or in an HTML-format e-mail, the attacker could flood the browser's address buffer (a chunk of computer memory reserved for storing Web addresses) and cause IE to crash. The miscreant could then send a program to take over your PC. To avoid these troubles, go to find.pcworld.com/47950 and download the cumulative IE update, which has fixes for the newly discovered flaws as well as all previous patches for versions 5.01 through 6. Even if you have installed Service Pack 2 for XP, you still need to patch IE.

Microsoft has also fixed a problem in the way Windows 2000 through XP SP1 handle network messages that use the Internet Protocol, the part of the Net that keeps track of e-mail routing and Web addresses. An attacker could send you a rogue IP message to crash your PC or, worse, gain control of your machine. You could be attacked without doing anything; however, most hardware routers on the Internet will not forward malformed IP messages. To be extra safe, download the patch at find.pcworld.com/47952.

Remember the old advice never to open an e-mail attachment from a questionable source? Microsoft has fixed two holes in the way Word 2000 through 2003 and Works Suite 2001 through 2004 handle opened attachments. If you open a bad attachment, a crafty cracker might send you a poisoned file that permits a remote takeover of your computer. So download the patch at find.pcworld.com/47954.

Finally, Microsoft has corrected a problem in the way MSN Messenger 6.2 handles certain graphics types such as emoticons and pictures created in the .gif file format. To be affected, you'd have to add the perpetrator to your contacts list. But if you were tricked into doing so, the offender could send you an improperly sized .gif image that would cause MSN Messenger to crash. In the ensuing chaos, the bad guy could send a program to control your PC. If you use version 6.2 of MSN Messenger, get the patch at find.pcworld.com/47956 or upgrade to version 7. ■

Stuart J. Johnston is a contributing editor for PC World. *Visit find.pcworld.com/31580 to see more* Bugs and Fixes *columns.*

FIX ANNOYING PROBLEMS IN OFFICE 2003

WHEN YOU OPEN a Microsoft Office 2003 document from a Web location, online folder, or Internet security zone, you may see a red X (signifying a broken link) instead of the intended graphic. This happens when the folder where Office 2003 tried to cache the image doesn't exist or when the user doesn't have the necessary security privileges to allow Office to cache the image at all. If this happens to you, get the fix at find.pcworld.com/47958.

Another Office 2003 issue: The software may stop responding when you try to check a document's Spanish spelling and grammar in apps such as Word, Excel, Outlook, and PowerPoint. Unfortunately, the workaround is to reinstall the entire Office 2003 suite. For details, head over to find.pcworld.com/47960.

IN BRIEF

WMP 9 Fix—Finally

BACK IN APRIL, I warned you about potential adware and hack attacks in Windows Media Player 9. Microsoft has plugged the hole and now offers the fix at find.pcworld.com/47962.

BUGGED?

FOUND A hardware or software bug? Tell us about it via e-mail at bugs@pcworld.com.

ILLUSTRATION: JASON SCHNEIDER

ThinkPad® recommends Microsoft® Windows® XP Professional.

LOSE THE WIRES. AND, WHILE YOU'RE AT IT, LOSE THE HACKERS.

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Hackers, beware. These ThinkPad® notebooks have Intel® Centrino™ Mobile Technology, so users can work wirelessly with greater freedom. And their work will be protected. Because select ThinkPad notebooks, like the T42 featured to the right, offer security features like an added layer of data protection—a vault-like combination of a built-in security chip and data encryption software. And we're the only ones to offer wireless PCs with this level of security as a standard feature. So users can be wireless. Without being defenseless.

ThinkPad R51

DISTINCTIVE INNOVATIONS
Embedded Security Subsystem 2.0[10] – Strong security as a standard feature

SYSTEM FEATURES
Intel® Centrino™ Mobile Technology
Intel® Pentium® M Processor 725 (1.60GHz)[1]
Intel® PRO/Wireless 2200BG (802.11b/g)[2]

Microsoft® Windows® XP Professional[3]

14.1" XGA TFT Display (1024x768)

256MB DDR SDRAM[4], 40GB Hard Drive[5]

$1049* (P/N2883ELU)

ThinkPad Carrying Case – Leather Attaché[6]
$129 (P/N73P3600)

ThinkPad T42

DISTINCTIVE INNOVATIONS
Embedded Security Subsystem 2.0 – Strong security as a standard feature

SYSTEM FEATURES
Intel® Centrino™ Mobile Technology
Intel® Pentium® M Processor 725 (1.60GHz)
Intel® PRO/Wireless 2200BG (802.11b/g)

Microsoft® Windows® XP Professional

256MB DDR SDRAM, 40GB Hard Drive

Only 1" thin[7] and 4.5-lb travel weight[8]

$1479 (P/N2378R4U)

ThinkPad Women's Executive Red Leather Tote
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ThinkPad® recommends Microsoft® Windows® XP Professional.

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Active Protection System: Protect your hard drive from some damage caused by drops and jolts.

Rescue and Recovery: Recover previously saved data in minutes with our one-button solution.

Access Connections: Switch between wired and wireless connections easily.[9]

Embedded Security Subsystem 2.0: Protect data and keep it private with our combined hardware and software solution.[10]

ThinkPad R50e

Mainstream performance and features.

SYSTEM FEATURES

Intel® Centrino™ Mobile Technology
- Intel® Pentium® M Processor 715a (1.50GHz)
- Intel® PRO/Wireless 2200BG (802.11b/g)

Microsoft® Windows® XP Professional

15" XGA TFT Display (1024x768)

256MB DDR SDRAM

30GB Hard Drive

CD-RW/DVD-ROM Combo

1-yr limited warranty[11]

THINK EXPRESS MODEL

$999 (P/N 1842PPU)

ThinkPad T42

Perfect balance of performance and portability.

SYSTEM FEATURES

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- Intel® Pentium® M Processor 725 (1.60GHz)
- Intel® PRO/Wireless 2200BG (802.11b/g)

Microsoft® Windows® XP Professional

256MB DDR SDRAM, 40GB Hard Drive

Only 1" thin[7] and 4.5-lb travel weight[8]

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ThinkPad T43 with Integrated Fingerprint Reader

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SYSTEM FEATURES

Intel® Centrino™ Mobile Technology
- Intel® Pentium® M Processor 750 (1.86GHz)
- Intel® PRO/Wireless 2915ABG (802.11a/b/g)

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14.1" SXGA + TFT Display (1024x768)

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3-yr system/1-yr battery limited warranty[11]

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$2049 (P/N 2687D3U)

ThinkPad X40 Solution Pack

Ultimate mobility in a versatile ultraportable.

SYSTEM FEATURES

Intel® Centrino™ Mobile Technology
- Intel® Pentium® M Processor LV 738 (1.40GHz)
- Intel® PRO/Wireless 2200BG (802.11b/g)

Microsoft® Windows® XP Professional

12.1" XGA TFT Display (1024x768)

Only .94" thin

3-yr system/1-yr battery limited warranty[11]

Accessories Included:
- X4 Ultrabase Dock
- Ultrabay Slim CD-RW/DVD-ROM Combo

THINK EXPRESS MODEL

$2249 (P/N 2832ECU)

ThinkPad Nylon Carrying Case

Inside you'll find SafePORT Air Cushion Protection which adjusts to cradle X, T, R or G Series notebook computers.

$49 (P/N 10K0207)

ThinkPad T40/R50 Series 9 Cell Li-Ion Battery

$179 (P/N 92P1102)

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(monitor not included)

ThinkCentre A50

Sleek tower design.

SYSTEM FEATURES

Intel® Pentium® 4 Processor with HT Technology 3GHz
Microsoft® Windows® XP Professional
512MB DDR memory at 400MHz
80GB 7200rpm drive, Combo Drive
6 USB 2.0 Ports (2 frontside)
3-yr limited warranty with 1-yr limited onsite service[12]

THINK EXPRESS MODEL

$899 (P/N 814723U)

ThinkCentre A50

Ultra Small form factor.

SYSTEM FEATURES

Intel® Pentium® 4 Processor with HT Technology 2.80GHz
Microsoft® Windows® XP Professional
256MB DDR memory at 333MHz
40GB 7200rpm Hard Drive, CD-ROM
6 USB 2.0 Ports (2 frontside)
1-yr limited warranty with 1-yr limited onsite service[12]

THINK EXPRESS MODEL

$629 (P/N 809011U)

E400 Projector

Small and feature-rich, the E400 is a cost-effective solution for your business and entertainment needs featuring DLP technology.

$999 (P/N 0038A04)

ThinkCentre A50

Sleek tower design.

SYSTEM FEATURES

Intel® Pentium® 4 Processor with HT Technology 3GHz
Microsoft® Windows® XP Professional
256MB DDR memory at 400MHz
40GB 7200rpm Hard Drive, CDRW
6 USB 2.0 Ports (2 frontside)
1-yr limited warranty with 1-yr limited onsite service[12]

THINK EXPRESS MODEL

$669 (P/N 814822U)

17" ThinkVision L170 Flat Panel Monitor

This affordable monitor is ideal for worksheets, multi-tasking, and general business applications. Plus, its small footprint is great for saving space.

$359 (P/N 6734AC0)

(monitor not included)

(monitor not included)

ThinkCentre A51P

Affordable performance.

SYSTEM FEATURES

Intel® Pentium® 4 Processor with HT Technology 3GHz
Microsoft® Windows® XP Professional
256MB DDR2 memory at 400MHz
40GB 7200rpm Hard Drive, CD-RW
8 USB 2.0 Ports (2 frontside)
1-yr limited warranty with 1-yr limited onsite service[12]

THINK EXPRESS MODEL

$799 (P/N 842721U)

Preferred Pro USB Fingerprint Keyboard

$99 (P/N 73P4730)

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Embedded Security Subsystem 2.0: Protect data and keep it private with our combined hardware and software solution.[10]

Rescue and Recovery: Recover previously saved data in minutes with our one-button solution.

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NEW PRODUCTS

EDITED BY LIANE CASSAVOY AND CATHY LU

TRIM TRIPLETS (from left to right): Sony's DSC-T7, Nikon's S1, and Casio's EX-Z750 don't hold back on features.

Compact Cameras Get Faster, Smarter, Thinner

Though these pocketable digicams may be small, they are certainly not slim on features. But which model is most suitable for shutterbugs?

DIGITAL CAMERAS

SMALL CAMERAS sometimes sacrifice features such as full manual controls and comfortable, one-handed operation to attain their tiny size. But Casio's **Exilim EX-Z750**, Nikon's **Coolpix S1**, and Sony's **Cyber-shot DSC-T7** all achieve a fairly good balance between features and size. Despite their diminutive dimensions all three shipping cameras provide a 2.5-inch LCD; 3X optical zoom; and attachable port extenders for USB 2.0, video-out, and power. Still, though I found aspects of each camera to like, in the end none of the models blew me away.

HANDS-ON TESTING

IN MY INFORMAL tests each camera started up in roughly 1 second, and each took a snapshot almost instantly after I pressed the shutter. Each needed a second or less, depending on image size, to store the photo before becoming ready to capture another shot. The 5.1-megapixel Sony T7 was a smidgen faster than the others at most tasks.

In our PC World Test Center shots, the 5.1-megapixel Nikon S1 captured the most accurate colors. The Casio EX-Z750 produced the sharpest photos overall, thanks in part to its 7.2-megapixel resolution. The Sony DSC-T7 lagged a bit behind on most tests; in our flash photo, for example, its reproduction was overexposed. Like many other point-and-shoot units we've tested, all three struggled with focusing in low-light conditions.

In battery tests the Casio captured 446 photos on one charge, for a total shooting time of 4 hours, 5 minutes. The Nikon came in next at 205 shots (1 hour, 30 minutes), and the Sony trailed with 150 pics (1 hour, 23 minutes).

NIKON'S CLEVER COOLPIX S1

THE 4.5-OUNCE Coolpix S1 is Nikon's first ultraslim camera, measuring about 0.75 inch thick. Nikon did a good job of outfitting it with photography tricks that help you take better pictures.

While Casio and Sony each include red-eye reduction in their camera's flash, Nikon promises that its model will automatically detect *and* remove red-eye errors before processing an image. Indeed, the flash portraits I took with the S1 came out red-eye-free.

Other nice features: The camera autodetects blurriness immediately after you take a shot and pops up a message asking if you want to keep the image. It also lets you lighten dark photos by applying a technique called D-Lighting.

PHOTOGRAPHS: MARC SIMON

52 DIGITAL CAMERAS
Casio Exilim EX-Z750, Nikon Coolpix S1, Sony Cyber-shot DSC-T7

54 DESKTOP
Dell Dimension XPS Gen 5

OPERATING SYSTEM
Apple Mac OS X Version 10.4

56 BARE-BONES PC
Shuttle XPC SN25P

DATABASE SOFTWARE
AskSam Systems AskSam Professional 6

58 SECURITY SOFTWARE
Symantec Norton Internet Security 2005 AntiSpyware Edition

HANDHELD
PalmOne LifeDrive

60 NETWORKED DVD PLAYER
GoVideo D2740 Wireless Media Receiver + DVD Player

TABLET PC SOFTWARE
Microsoft Experience Pack for Tablet PC

64 VIDEO EDITING SOFTWARE
Ulead VideoStudio 9

66 SUBNOTEBOOK
Toshiba Libretto U100

This feature worked pretty well on one of my dimly lit shots, brightening the scene overall but also introducing minor artifacts.

Though the S1's $380 initial investment seems reasonable, you'll have to spring for an SD Card, as the camera ships sans media and includes a paltry 12MB of internal storage.

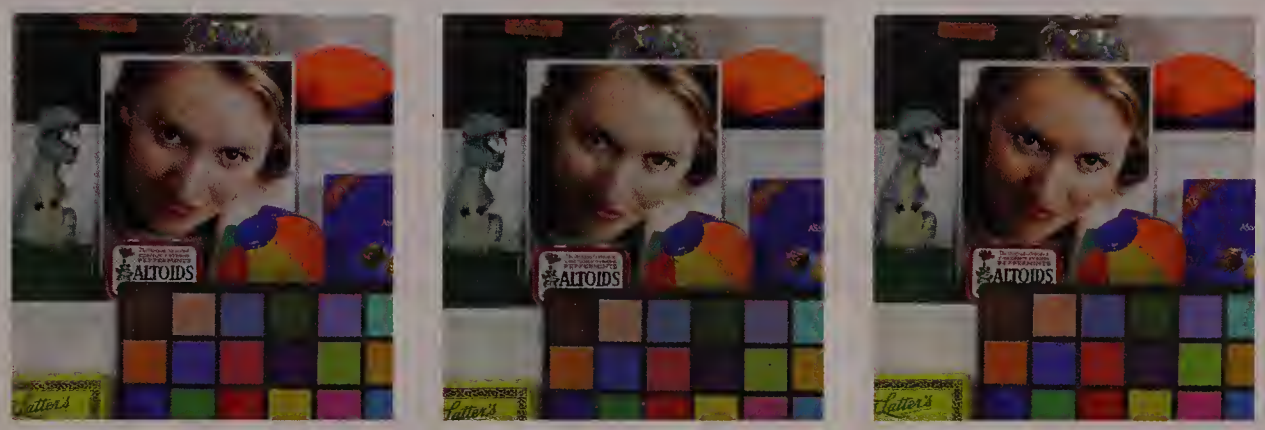


IMAGE IMPRESSIONS: In this still-life test shot, Nikon's S1 (left) struck a terrific balance between rich colors and spot-on lighting exposure. Photos from Sony's DSC-T7 (middle) and Casio's EX-Z750 (right) looked good, but colors were off in some spots, and the Casio had trouble reproducing the white background.

CASIO'S EASY EXILIM EX-Z750

BESIDES HAVING the highest resolution of the three, the EX-Z750 surpasses the Nikon and the Sony in ease of use, thanks to an intuitive menu system plus well-placed buttons and controls. The camera is comfortable to handle, and (unlike the other two models) it includes an optical viewfinder for framing shots, in addition to the LCD.

Casio also offers a few useful photo-enhancement functions on the EX-Z750. For example, it has an on-camera editing feature that adjusts the brightness or white balance of saved photos. In addition, it has a ton of scene modes—30, to be exact—including one for office-focused photography such as shooting whiteboards.

The $450 EX-Z750 has only 8.3MB of on-board memory, and it ships without a starter SD Card or MultiMediaCard. Tip: If you're looking for a comparable 7-megapixel camera, check out the similarly configured Canon PowerShot SD500 (see "Choose the Perfect Camera," page 107).

SONY'S STUNNING CYBER-SHOT DSC-T7

THE 4.7-OUNCE Cyber-shot DSC-T7 is a head-turner. At just 0.625 inch thick, it's one of the slimmest cameras I've seen. It sports a sturdy metal body and nice details, such as well-made levers and a substantial cover for the battery housing (most cameras have flimsy rubber covers that fall off or break easily).

But the $500 DSC-T7 does have its share of design flaws. Its slimness, combined with the positioning of several buttons on the left, made the camera somewhat awkward to hold and use at times. And because the navigation buttons are on the left and the shutter is on the right, I was unable to operate the camera with one hand, which was frustrating. I could never get a comfortable grip on the camera, and I ended up smudging the LCD with my fingerprints on more than one occasion.

The good news: The DSC-T7 comes with both a 32MB Memory Stick Duo and a compact battery charger. (The Casio and Nikon models recharge their batteries inside the camera when you seat them in the included cradles.)

After shooting with these cameras, I'm hard-pressed to give any of them a glowing recommendation—all three had niggling issues. I would seriously consider buying the Casio EX-Z750 or the Nikon Coolpix S1. However, if I had my way I would combine the vibrant image quality of the Nikon, the intuitive menus and sharp photos of the Casio, and the sturdy housing and svelte design of the Sony to make the perfect tiny camera.

—Grace Aquino

Coolpix S1
Nikon
★★★½☆
Edges out the other models by delivering colorful photos.
Street: $380
find.pcworld.com/48036

Cyber-shot DSC-T7
Sony
★★★☆☆
Those wanting to score style points need look no further.
Street: $500
find.pcworld.com/48035

Exilim EX-Z750
Casio
★★★½☆
A solid choice if you're searching for a user-friendly camera.
Street: $450
find.pcworld.com/48037

Dell's Pricey Dual-Core System Scores

DESKTOP

DELL PACKS ITS **Dimension XPS Gen 5** PC with high-end hardware, starting with Intel's new 3.2-GHz dual-core Pentium Extreme Edition 840 processor and Dell's lovely 20.1-inch wide-screen UltraSharp 2005FPW digital flat panel. However, this loaded system costs a hefty $3999.

The dual-core processor essentially equips the system with two CPUs, giving it extra oomph for multitasking. Our tests bear that out: Though our shipping unit scored 94 on WorldBench 5 (only a point or two higher than systems with the same-speed, non-dual-core CPU), it performed well on the multitasking test, shaving off 1 minute, 51 seconds from the 11 minutes, 52 seconds the same Dell system took with dual-core disabled. It also demonstrated decent gains with multithreaded software (designed to recognize multiple processors) such as Roxio VideoWave and Windows Media Encoder.

Though this Dimension failed to set speed records, gamers shouldn't be disappointed with its performance, thanks to its powerful ATI Radeon X850 XT Platinum Edition PCI Express graphics card with 256MB of RAM, a TV tuner, and DVI-out. DVD playback also looked good, though we had to play with video and DVD settings to get the best picture possible.

Built as an entertainment center, the XPS Gen 5 runs Windows XP Media Center Edition and comes with a terrific six-piece Logitech Z-5500 speaker set (driven by Creative's Sound Blaster Audigy 2 ZS); a DVD±RW drive that can record to dual-layer discs; a multiformat flash card reader; and two remote controls (for the system and the speakers). Two 250GB Serial ATA hard drives in a RAID 0 configuration and 1GB of dual-channel 667-GHz DDR2 memory complete the package.

Multimedia mavens and other power users will appreciate the Dimension XPS Gen 5, but the price puts it a bit out of reach for most buyers.

—Anush Yegyazarian

Dimension XPS Gen 5
Dell
★★★★☆
State-of-the-art components justify the price, but it's still too expensive for most folks.
Street: $3999
find.pcworld.com/48038

DELL'S SHINY BEAST loads on high-end parts, but the price tag puts a serious dent in the wallet.

Apple's Tiger OS Lives Up to the Hype

OPERATING SYSTEM

CONTRARY TO what Mac cynics might say, the upgrades in **Mac OS X Version 10.4** (also known as Tiger), Apple's latest operating system, are not just cosmetic. New features such as Tiger's search tool are powerful enough to change the way Mac users work, and intriguing enough to possibly convert a few Windows users.

The $129 upgrade should work on any G3, G4, or G5 FireWire-era Mac. I installed a shipping version of the OS in about an hour each on an aging 867-MHz PowerBook and a newer 1.67-GHz PowerBook, with no problem.

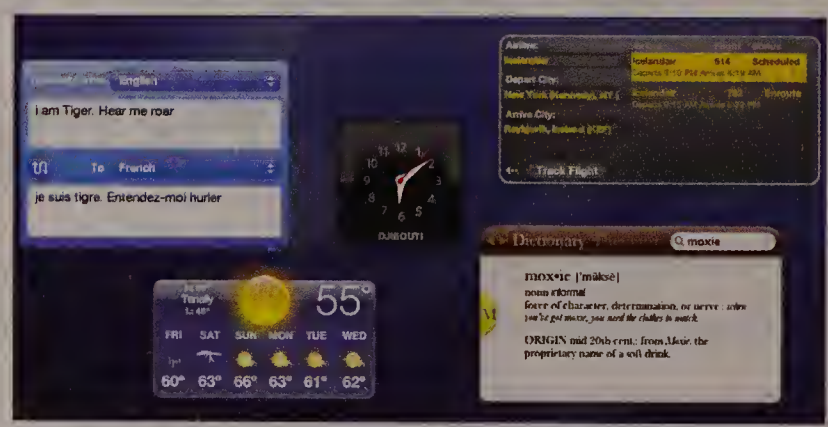
Tiger's breakthrough feature is Spotlight, a desktop-search tool that rummages through files, folders, e-mail, Apple applications, and major third-party programs such as Microsoft Word and Excel (but not Entourage e-mail). It then displays results neatly by category. Spotlight can search by the usual criteria (file name, keywords) but also by a dizzying variety of deeper "metadata" such as author, audio bit-rate, and photo aperture. You can even save Spotlight searches as Smart Folders that continually update and add related files.

Tiger includes plenty of other useful additions. Dashboard Widgets are attractive miniapplications that aggregate information like stock prices and flight times. You also get Safari support for RSS (Really Simple Syndication) for reading blogs and news feeds, as well as parental controls for the Finder, Mail, IChat, and Safari.

Reports of networking bugs have surfaced, so if you use a cross-platform network or VPN, check for compatibility. You don't *need* this upgrade. But Spotlight is cool and useful enough to make Tiger well worth the purchase price.

—Narasu Rebbapragada

Mac OS X Version 10.4 (Tiger)
Apple
★★★★½
Robust desktop-search tool makes Tiger a worthy upgrade.
List: $129
find.pcworld.com/47914



NEW TO TIGER: miniapplications called Widgets, which offer quick glimpses at useful information such as weather and flight times.

PHOTOGRAPH: MARC SIMON

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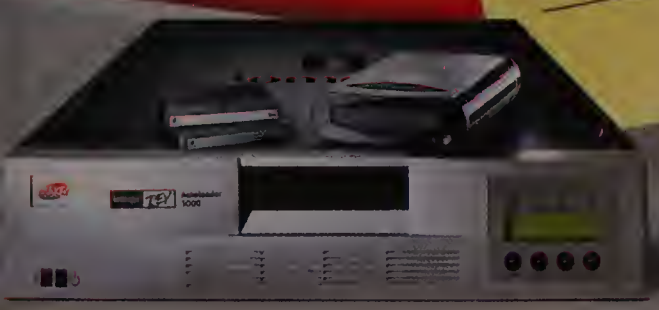

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Shuttle's Powerful but Noisy Compact System

BARE-BONES PC

SHUTTLE'S NEW bare-bones system, the **XPC SN25P**, lets do-it-yourselfers build a small PC with all the power and technology typically found in a full-size tower. Unfortunately the end result is too noisy.

The $420 XPC SN25P includes Shuttle's FN25 motherboard, the company's first to feature the excellent NVidia NForce4 media and communications processor (MCP) chip set—which supports PCI Express graphics cards—and AMD's 939-pin Athlon 64 processor. The system also comes with Via's solid Envy24PT on-board eight-channel audio chip, four Serial ATA connectors, a gigabit ethernet port, and a 350-watt power supply.

The SN25P is larger than the Shuttle XPC SN41G2 (find.pcworld.com/48056), providing more room to work inside. I had little trouble installing the processor, memory, and graphics card in my preproduction unit. The toolless drive-mounting brackets made installing the hard drive and optical drive equally easy.

I did have a problem with the system's integrated bay doors: I couldn't adjust the case's optical-drive eject button to reach the slightly inset eject button on the TDK Indi DVD drive I wanted to install. This forced me to switch to a different optical drive that had a protruding eject button—hardly an optimal solution.

SHUTTLE'S SLICK SN25P offers a ton of power but has some design flaws, as well, including much-too-loud fans.

The system contains six fans of its own: two as part of Shuttle's proprietary Integrated Cooling Engine (ICE), two in the rear to cool the chassis's "hard drive zone," a power-supply fan, and a chip-set fan. Though I was able to lower the system fan speed via a setup menu, the SN25P still sounded like a Harrier jet poised to land on my desk. The two rear fans were particularly annoying, emitting a high whine.

If you're looking to build a powerful, portable desktop computer for LAN parties, the XPC SN25P is a fine choice. But if you just want a small, unobtrusive system, this little one is not for you.

—*Tom Mainelli*

Shuttle XPC SN25P
Shuttle
★★★☆☆
Small, well-designed system offers the latest technology but is just too noisy.
List: $420
find.pcworld.com/47910

AskSam 6 Adds Flexibility

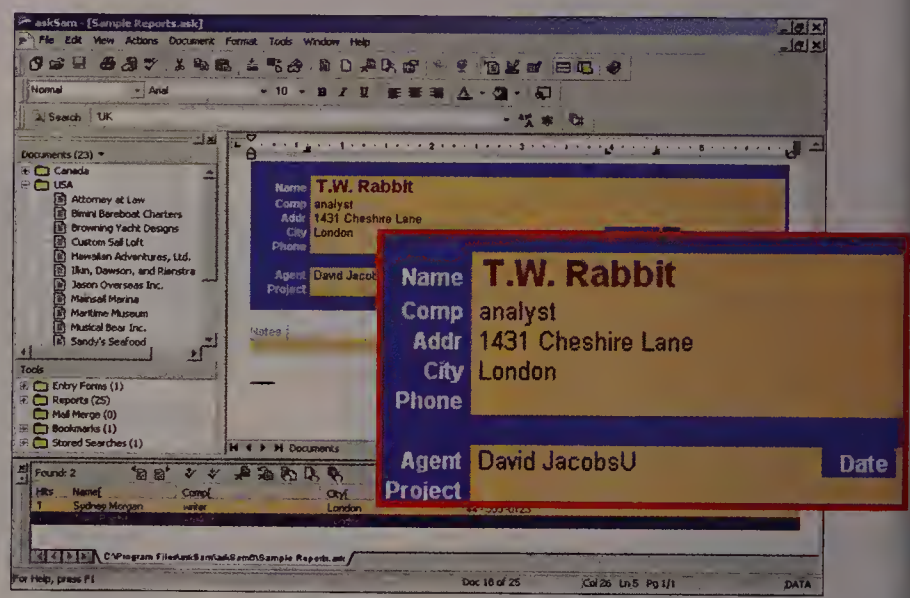
INFORMATION MANAGER

IF YOUR IDEA OF a free-form database is a giant Word document of names and addresses, it's time to meet AskSam. I recently tested the shipping version 6 and found plenty to like—though first-time users might face a learning curve.

AskSam's free-form structure means you don't have to parse a file's contents and reenter information into traditional database fields. Instead, it imports most document formats—text files, e-mail messages, PDFs, and even Web pages—into searchable fields.

I started by importing a Word file containing names and numbers into the $395 **AskSam Professional 6** (the $149 Standard version lacks full text indexing, so it isn't as speedy), and found the program's ability to retain the document's original appearance impressive. I could even sort the results in ways that put Word's search function to shame.

Along with a new interface, version 6 adds versatile folder-management tools that let you group records by any field.



THE WEB RESEARCH TEMPLATE allows you to save, notate, and retrieve Web pages, and it even works with hyperlinks.

Simply enter a new category into a field, and AskSam generates subfolders for each sortable field. You can view these dynamic folders by date, content, keywords, and more.

AskSam comes with dozens of templates, including ones for addresses, recipes, and Web pages. However, Internet Explorer—the only supported browser—tends to crash when you're using AskSam (the company promises a patch).

Organizing data is an ongoing struggle for PC users, but AskSam makes that task a little easier. —*Peggy Watt*

AskSam Professional 6
AskSam Systems
★★★★☆
This is the ultimate tool for searching, sorting, and organizing information.
List: $395 Professional, $149 Standard (both single-user)
find.pcworld.com/48004

PHOTOGRAPH: MARC SIMON

THE LG FLATRON IS FLAT-OUT THIN.

INTRODUCING THE NEW 80 SERIES LCD FLATRON™ MONITOR FROM LG; the slimmest flatscreen in its class. Its *f*·ENGINE™ technology features the first LCD picture-enhancing chip to provide not only astounding color, but superb contrast and image quality. With an 8 millisecond response time, the FLATRON 80 Series meets the visual quality demands of 3D gaming and high-speed graphics. To see all the LG LCD monitors in sizes ranging from 15"–30," visit LGusa.com.

LG Life's Good

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8ms Ultra Fast Response Time

BEST BUY

80 Series model shown

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Symantec Offers So-So Spyware Protection

SECURITY

ANTIVIRUS powerhouse Symantec takes aim at spyware with its free public beta of **Norton Internet Security 2005 AntiSpyware Edition**. The final version, due by midyear, will sell for about $80, but my initial tests show that the beta, at least, may not be your best bet for spyware protection.

Like previous versions of Norton Internet Security, the 2005 offering is meant to be all-inclusive, containing such necessities as a firewall and antivirus protection.

To check out the utility's anti-spyware chops, I subjected my test PC to 12 common spyware and adware apps: Bargain Buddy, Hotbar, Huntbar, Internet Optimizer, ISTbar, Perez Toolbar, Total Velocity, and Xupiter, plus two variants each of the Downloader and StartPage Trojan horses.

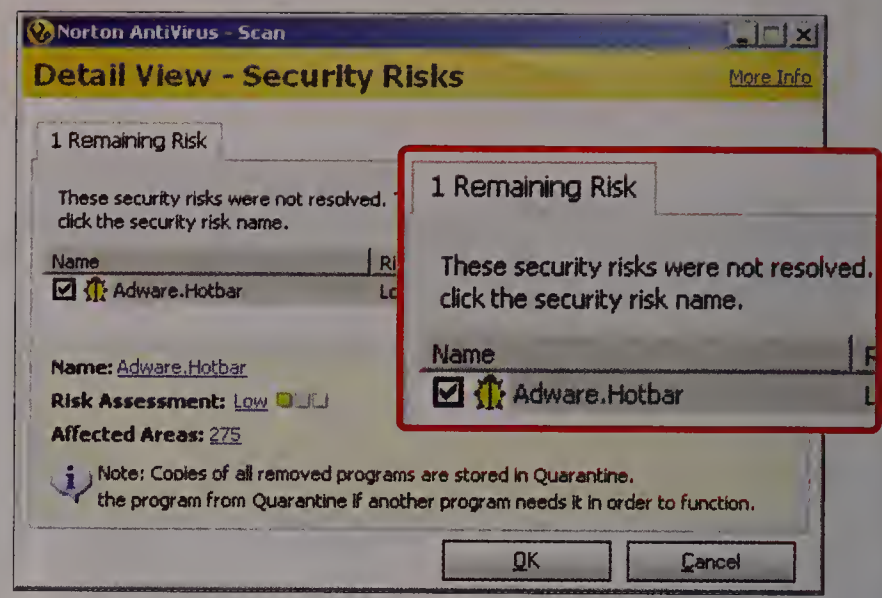
Though Norton accurately identified and blocked the Downloader and StartPage Trojan horses, its results with the remaining spyware and adware were mixed. It ignored Total Velocity and Xupiter; and when it alerted me to Hotbar's presence, it recommended that I not only keep the program but also allow it full Internet access. And when Total Velocity and Xupiter tried to connect to a DNS server, Norton recommended I permit full access for both.

The beta software also lacks the ability to restore a Web browser's hijacked start and search page settings, and it omits protection against modifications to your Hosts file (essentially an Internet address book on your PC).

Still, the Norton Internet Security 2005 AntiSpyware Edition beta showed promise, and Symantec fans will no doubt embrace its all-in-one approach to security. And you can't beat the beta's free price.

—Mary Landesman

Norton Internet Security 2005 AntiSpyware Edition
Symantec
Beta software, not rated
Accurately identifies and blocks some spyware apps, but overall results were mixed.
Street: Beta free to download, final version $80
find.pcworld.com/47955



NORTON ALERTS USERS to the presence of the Hotbar adware application, but its advice about what to do next can be confusing.

PalmOne's Lively LifeDrive

HANDHELD

PALMONE'S **LifeDrive** puts almost everything you'd want from a notebook—document editing, e-mail access, and plenty of storage—into a package not much larger than a typical early MP3 player. I tested a preproduction model of this $499 device, a gadget that's sure to turn heads.

At its heart, the LifeDrive is a PalmOS PDA offering the same controls, expansion slots, and basic applications you'd expect from a Tungsten or Treo. The downside: It's a tweener—too big to easily fit in a pocket, and too small storagewise to qualify as a substitute for a video or MP3 player.

The "Drive" in the LifeDrive is a built-in 4GB Microdrive, which can hold a full slate of contacts, documents, photos, videos, and music.

Software includes Exchange ActiveSync, for checking Outlook e-mail, and Documents To Go, for document editing. Built-in Bluetooth and Wi-Fi connectivity, as well as a beautiful 320-by-480-pixel color display, round out the package.

With that crisp, colorful screen, the LifeDrive should excel as a video player. However, while the clips I watched looked decent, playback was not completely smooth.

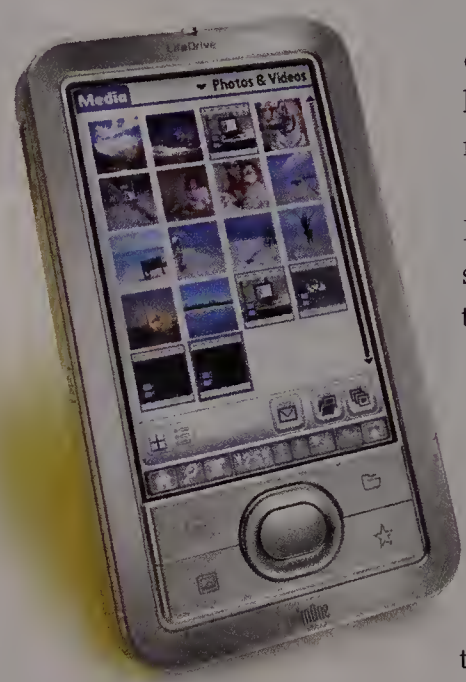
As an MP3 player, the LifeDrive is all potential. Music sounded quite good, though the headphone jack is awkwardly located on the bottom of the device. An app called PTunes lets you organize and play MP3s, and supports Rhapsody To Go.

But with an application called Camera Companion, the LifeDrive really shines. The program turns the device into a storage repository for your digital photos, one that's much lighter and easier to tote around than a laptop.

In fact, that's the LifeDrive's most useful role: filling in for your laptop in a pinch.

—Eric Dahl

LifeDrive
PalmOne
Preproduction model, not rated
This mobile computer/media player will come in handy when you don't want to carry a laptop.
List: $499
find.pcworld.com/47970



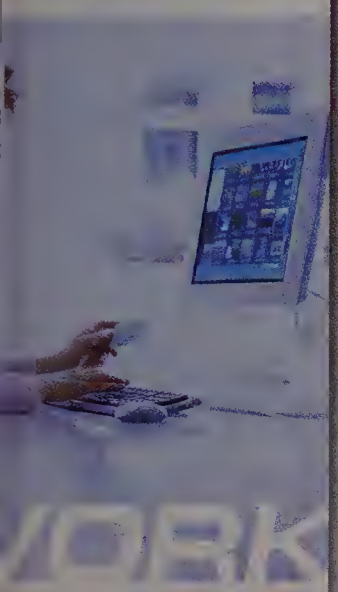
THE LIFEDRIVE offers almost everything you'd want from a laptop in a PDA-size package.

PHOTOGRAPH: MARC SIMON

Access. Store. Share.

Access data and multimedia files quickly. Store important files in one safe location. Share digital files through network connections.

April 26, 2005
Buffalo TeraStation



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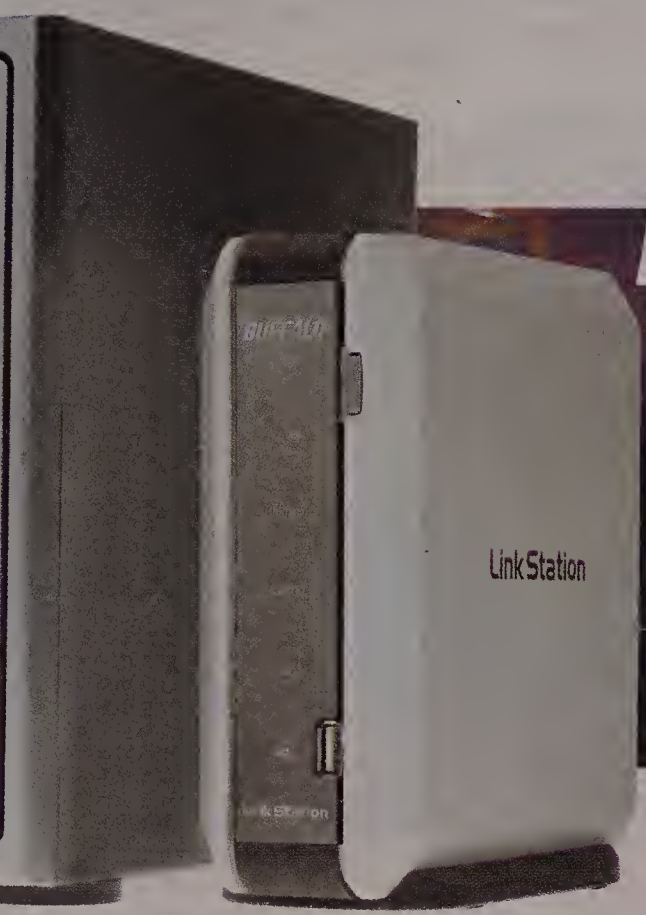

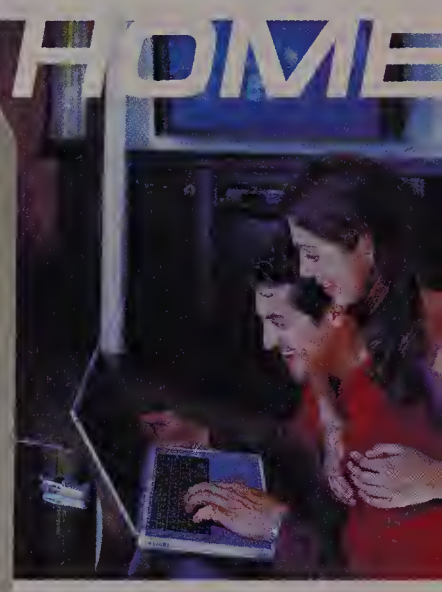

HD-HG400LAN

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- Gigabit Ethernet (10/100/1000Mbps)

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Networked DVD Player Improves Slightly

DVD PLAYER

AT LONG LAST, GoVideo has released a new version of its networkable DVD player, the **D2740 Wireless Media Receiver + DVD Player**. While this model deserves praise for worthy improvements over its predecessor, the D2730, it may not deserve $180 from you.

The biggest change is the inclusion of an integrated ethernet jack and 802.11g wireless networking. The previous player required an add-in card for connectivity, and could support only 802.11b wireless.

GOVIDEO HAS IMPROVED its networked DVD player, but the device still stumbles with both DVD playback and media streaming.

D2740 Wireless Media Receiver + DVD Player
GoVideo
★★½☆☆
Though GoVideo has improved this networked DVD player, it still can't compete with most standalone DVD models.
Street: $180
find.pcworld.com/47957

Once connected over my 802.11g wireless network, the shipping version of the D2740 I tested easily found the computer on which I had installed the included software. The software enables the device to retrieve a slew of stored media files, as well as feeds from the $10-per-month streaming-music service Rhapsody. Music and video both played smoothly, with no hiccups.

Unfortunately, the improvements stop there. The D2740 still relies on Digital 5's barely usable streaming-media server software. Using video-out to a TV, the D2740 displays a pair of DOS-like blue windows, one containing a list of media folders matching the collections on the PC, the other showing lists of content by type. Scrolling through the listings is time-consuming, and made more difficult by GoVideo's chintzy remote control, which fails as often as it succeeds in transmitting an infrared signal.

As a DVD player, the D2740 produces acceptable image quality, with good color and grayscale performance. The deinterlacing for progressive-scan output, however, is a bit rough. I noticed "crawling" in video featuring sets of parallel lines, such as the railings and siding on houses in the opening scene of *Mystic River*.

Given the D2740's middling performance—in both DVD movie playback and streaming media—you'd be better off with a separate DVD player and media streaming device.

—*Seán Captain*

A Fun Freebie for Tablet PCs

TABLET SOFTWARE

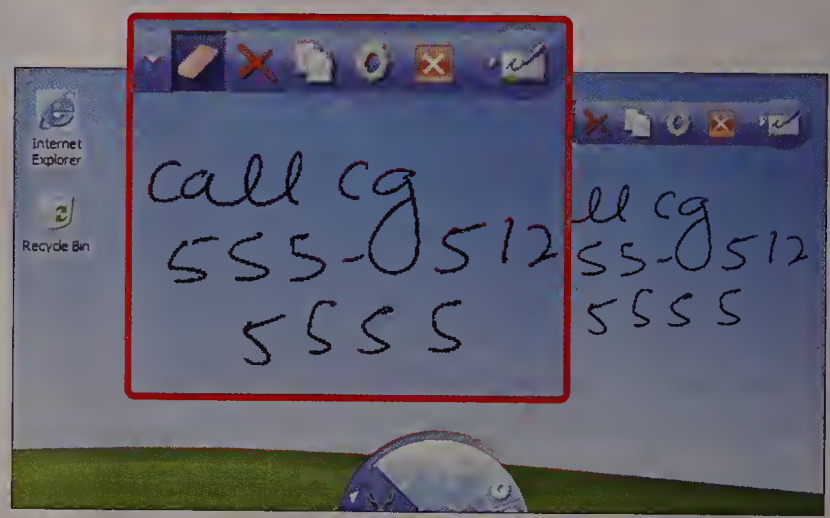
TABLET PC USERS, grab your styluses: Microsoft has a gift for you. The **Experience Pack for Tablet PC** may not be reason enough to buy a portable running Windows XP Professional Tablet PC Edition, but the free download is definitely worth the few minutes necessary to install it.

The Experience Pack consists of half a dozen utilities and applets that are more about fun and frills than hardcore productivity. Among the most useful in the shipping version I tested: the Ink Desktop, which lets you scribble directly onto a tablet's touch screen—a handy feature for jotting down quick notes.

Experience Pack for Tablet PC
Microsoft
★★★½☆
These fun tablet extras are designed for everyone—and the price is zero.
Free download
find.pcworld.com/47884

The upgraded Snipping Tool 2, which allows you to define a portion of the screen with the stylus and then virtually "snip" it, offers a host of new options, most notably image editor–style rectangular and circular snipping tools.

Aspiring artists can get a taste of graphics software with Ink Art, a program reminiscent of Corel's natural-media app, Painter. I also enjoyed the ink-aware crossword puzzle application, although I was hoping for a *New York Times* puzzle instead of the daily free downloadable Universal Crosswords puzzle.



THE EXPERIENCE PACK'S INK DESKTOP lets you scribble phone numbers and other quick notes directly on the tablet's touch screen.

I was less impressed by the Energy Blue Theme Pack's skin for Windows Media Player, which was supposed to be optimized for tablet use but seemed clunky. Similarly, the Media Transfer feature for moving music and videos between PCs appeared unnecessarily complicated when there are so many other ways to get the job done. But these misfires don't negate the worthiness of this free upgrade.

—*Yardena Arar*

PHOTOGRAPH: MARC SIMON

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- 1-year limited warranty

$249.99 PRINTER CDW 433732
$40 MAIL-IN REBATE AVAILABLE[2]

HP PSC 2355 All-in-One

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- Print resolution: up to 4800 x 1200 dpi optimized
- Scan resolution: up to 19,200 dpi enhanced and 48-bit color
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-20 INSTANT SAVINGS[3]
$179.99 INSTANT SAVINGS BEGINS 5/31/05

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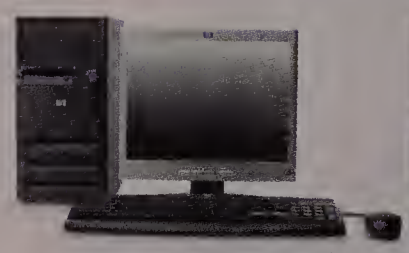

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HP recommends Microsoft® Windows® XP Professional.

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Monitor sold separately

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VideoStudio 9 Brings Video Editing to the Masses

VIDEO EDITOR

VIDEO EDITING is becoming an increasingly mainstream activity, and new programs like Ulead's **VideoStudio 9** are making this once-complex hobby easy for novices.

I tested a shipping version of the $100 application and found that it makes capturing, editing, and outputting video simple. Especially noteworthy is the DV-to-DVD Wizard, which takes video from a digital camcorder to a DVD in just a few simple steps.

VideoStudio 9 also features a Movie Wizard that can assemble a group of clips, add background music, and output them quickly in one of 12 templates, with opening title sequences and graphics.

The app includes a selection of video filters for exposure and color correction, as well as special effects (such as an impressive ghost motion filter for horror movies).

ULEAD'S VIDEOSTUDIO 9 lets you select from a wide variety of transitions to use when assembling video clips and adding titles.

However, VideoStudio 9 is sometimes slow to respond, and the preview of the edited video is also slow to appear. And though you get a good selection of built-in transitions and video effects, you can't tweak them much.

These quirks are annoying, but none are likely to get in the way of using the program. VideoStudio 9 is an effective way for a novice user to copy movies from a digital camcorder to a DVD easily.

—Richard Baguley

VideoStudio 9
Ulead
★★★★☆
VideoStudio 9 is a simple-to-use video editor, though it can be noticeably slow to respond.
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The New Voice of Business

Toshiba's Libretto: A Mini-Notebook With Max Power

SUBNOTEBOOK

"THAT'S JUST LIKE a computer, only smaller!" a friend exclaimed when he spied the preproduction version of Toshiba's new $1999 **Libretto U100** mini-notebook I was testing. About the size of a videocassette and weighing just over 2 pounds, the Libretto is small in everything except power and performance.

Libretto U100
Toshiba
Preproduction model, not rated
A hard-to-use keyboard and input device hold back this otherwise solid mini-notebook.
Street: $1999 (without DVD)
find.pcworld.com/47965

The Libretto U100 features a 7.2-inch wide-screen LCD and an integrated LED backlight. The crisp, bright 1280-by-768-resolution screen supplies a luscious concentration of colors, but fonts and icons were so tiny I needed to put my glasses on—except they *were* on already.

The keyboard and touchstick mouse are too small, as well, making even pointing and clicking hard. Fortunately, two USB ports are located on the side, so you can at least add on an external mouse.

Toshiba considers the unit's optical-drive dock optional, so you'll need to cough up an additional $342 if you want a multiformat DVD drive.

THE TOSHIBA LIBRETTO U100 has an ultrasmall keyboard.

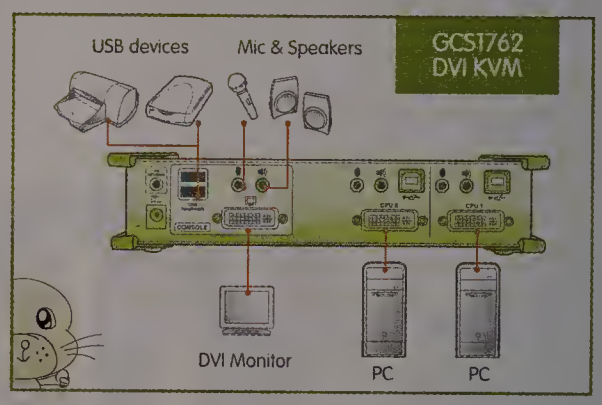
The device's battery life was about 2 hours, 20 minutes with a DVD playing and close to 3 hours, 30 minutes when the unit ran without the drive. The Libretto's 1.2-GHz Intel Pentium M Ultra Low Voltage 753 processor and standard 512MB of DRAM provided enough oomph for looking at photos, cruising the Net, and using Office apps. The 1.8-inch hard drive offers 60GB of storage.

Overall, the Libretto's miniature size and light weight will attract veterans of the road who want to travel without being encumbered. My advice: Try out the keyboard and touch stick before you buy. If you can deal with them, you'll have an otherwise worthy and powerful portable PC.

—*Michael S. Lasky*

PHOTOGRAPH: MARC SIMON

The DVI KVM for PCs.



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With Texas Instruments' DLP technology, projectors deliver the quality and value users want the most

When you net it out, the one projector quality users value above all else is the ability to reproduce the source material as exactly as possible. With its unique micro-mirror technology, DLP™ technology from Texas Instruments gives projectors exactly that—an incredibly sharp, clear, and accurate image, whether for business or home use.

Dell's 1100MP is a full-featured projector with an affordable price.

In use today by more than 75 hardware manufacturers globally, DLP-based projectors literally outshine most of the alternatives because, being mirror-based, they use light more effectively. The microscopic mirrors capture light from the projector lamp that is often lost by other projectors. The result is a stunning, colorful, and accurately replicated projector image.

Not only do DLP-based projectors produce superb images, but DLP technology is not susceptible to heat, humidity, or vibration, common environmental factors that can cause image degradation.

Dell's DLP excellence

What buyers want from a projector—namely high quality, great value, and ease of purchase—is exactly what they get from Dell's entire line of DLP-based Performance Projectors. This projector line lets customers match specific solutions to specific presentation needs with world-class results.

The Dell DLP projector experience begins with buyers dealing with a single point of contact—Dell—acting as a technology partner to map the right projector to present and future needs. Dell's legendary quality, backed by innovative warranties and professional support, serves as a buyer's security blanket. Buyers also get true plug-and-play capability with Dell's Latitude and Inspiron notebooks and compatibility with Microsoft Windows operating systems.

Budget-conscious buyers who still want a full-featured projector solution should consider the Dell 1100MP, which delivers a powerful 1400 lumens. The projector's Quick Setup guide gets even novice users up and running in six simple steps. Like all of Dell's DLP projectors, the 1100MP comes out of the box as a complete solution, with all required cables, a remote, and carrying case.

Toward the higher end of Dell's DLP projector line is the Dell 4100MP, specifically designed for presentations in large conference rooms or classroom settings. These are environments that benefit from the Dell 4100MP's power, brightness, and extensive connectivity. The advanced features of the Dell 4100MP provide brilliant, sharp images from virtually any location in a room.

■ *To find out more about Dell's line of DLP-powered projectors, visit www.dell.com/projectors.*

InFocus in step with DLP

Because DLP-based projectors require only one display panel whereas other technologies require three, vendors building projectors using DLP subsystems have ample room available for innovative designs. Thus, DLP-based projectors are often lighter, slimmer, and more elegant than the competition.

The true genius of DLP technology shines through in sparkling brilliance in the InFocus LP600 meeting room projector (www.infocus.com). Sporting an array of features delivering peerless power coupled with

Continued on page 4

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- Native SVGA (800 x 600) Resolution with Auto Sync to SXGA+
- Supports PC, S-Video, Composite, and Component (HD) and RS232 Inputs
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- 2-Yr Advanced Exchange Service* Plan

Recommended Upgrade:
- 3-Yr Standard Advanced Exchange Service* Plan, add $150

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- 2000-Hour Lamp (Up to 2500 Hours in Eco-Mode)
- 1-Yr Advanced Exchange Service* Plan

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- Features LCD Interactive Screen, PIP and Optional 6-in-1 Memory Card Reader
- 2-Yr Advanced Exchange Service* Plan

Recommended Upgrade:
- 3-Yr Standard Advanced Exchange Service* Plan, add $150

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PICTURE BY DLP™ A TEXAS INSTRUMENTS TECHNOLOGY

Continued from page 2
ease of use, the LP600 frees users from lugging a PC along due to its impressive list of connection options. These include the option of going PC-free with a USB flash drive as well as wired or wireless computer connections, and connections for video sources. This means users focus on what's important—their presentation—while the equipment hums along flawlessly.

The InFocus X1a delivers 1100 lumens and allows quick hookups with laptops, PDAs, and other devices.

Powerful, versatile, yet with the user friendliness for casual users, the LP600 offers a striking 2000 lumens, native XGA resolution, stereo audio input, and super-quiet operation. Its user-defined remote controls are highly intuitive, and an LCD status panel is available for instant updates. Add in auto keystone correction and rich sound capabilities, and users are assured of a highly professional presentation for any boardroom audience.

For business owners and educators seeking a value-priced projection solution, the InFocus X Series projectors mark the spot where work and play intersect. All X Series models feature extra lamp life and industry-leading reliability, making the series the top-selling projector platform.

The InFocus X1a offers a variety of business and leisure-time input capabilities, allowing quick hookups with laptops, PDAs, DVD players, cable or satellite TV systems, digital cameras, or game consoles. Its powerful lens can fill an entire wall, delivering 1100 lumens of superior brightness in almost any room environment. The X2 has features that add extra brilliance to presentations.

The InFocus X3 offers additional resolution, wireless freedom, as well as native XGA resolution and 1600 lumens of brightness. The X3 is as adept at showcasing the latest sales projections as it is at showing off the digital photos from last summer's vacation.

■ *For more information on InFocus projector lines featuring DLP technology, visit www.infocus.com.*

Versatile and reliable

Whether you are a business user or home user or, as is often the case today, someone in need of a projector for business *and* home use, DLP projectors offer incredible versatility. The same DLP projector you use for a world-class boardroom or sales presentation will work its magic in the family room. These projectors can even double as the ultimate PC game enhancer for kids and grown-up gamers alike, especially since they do not have "burn-in" issues found with other imaging technologies.

When it comes to color and contrast, DLP technology reproduces a staggering range of colors. In DLP Cinema™, for example, DLP Cinema projectors can produce up to 35 trillion colors with unbelievable contrast ratios for rich blacks and bright whites. The end result of this and the other intelligently designed features of DLP technology are projectors that deliver what users want—sharp, brilliant images that won't fade or degrade over time.

■ *To find out more about the revolutionary DLP technology and its many applications, go to www.dlp.com.*

The Lowdown on Lumens

Of the many specifications to consider when purchasing a projector, one that should be of particular interest is the lumen rating—essentially a measure of projector brightness. Lumen ratings usually start around 1000, but can go up to 3500 and higher.

So what do you need in terms of lumens? If most of your projecting will be done in a lights-off environment, then the lower lumen ratings will work just fine. But often a darkened room is not possible or even desirable, such as in a boardroom. If this kind of setting defines a lot of your projection work, then look for a minimum of 1500 lumens.

Finally, if your work takes you in front of large audiences in settings that often require large images, then you should consider projectors rated at 2000 lumens or higher. Be sure to take into account not only your current projector needs, but also whether those needs are likely to change in the near future. And for very large venue displays, DLP projection systems can reach a stunning 30,000 lumens.

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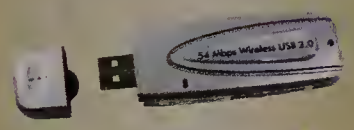

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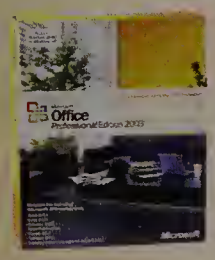

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ONCE YOU KNOW, YOU NEWEGG.

30 Things You Didn't Know You Could Do on the Internet

The Web is learning new tricks every day. These surprising sites and services will help you solve problems and save time—and one might even make you a star.

BY DAN TYNAN

SO YOU THINK YOU HAVE the Web all figured out? Well, think again.

Did you know that you could charter a private jet online, star in your own reality TV show, or download songs as you drive your car? That's just the beginning. You can tell your boss a few unpleasant truths without revealing your identity and sniff out trends before your oh-so-hip friends get wind of them. Using the right sites, you can give Google a face-lift, promote your products or bloviate about your blog, publish a novel, write a business plan, scan your PC for spies, and get free tech help. You can even use the Web to uncover government secrets and to predict your own demise. (Those last two activities will be unrelated, we hope.) Best of all, most of these sites won't charge you a dime.

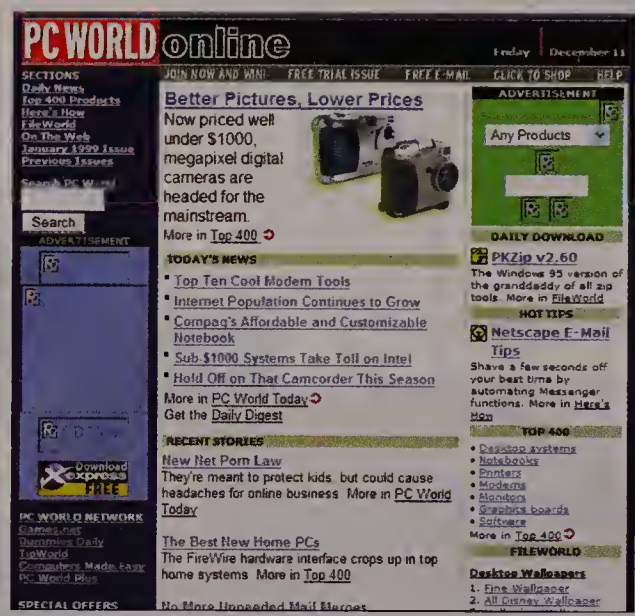
Here are some of the more surprising things the Web can do for you. ▶

ILLUSTRATIONS BY DOUG ROSS

blog

Go Back in Time

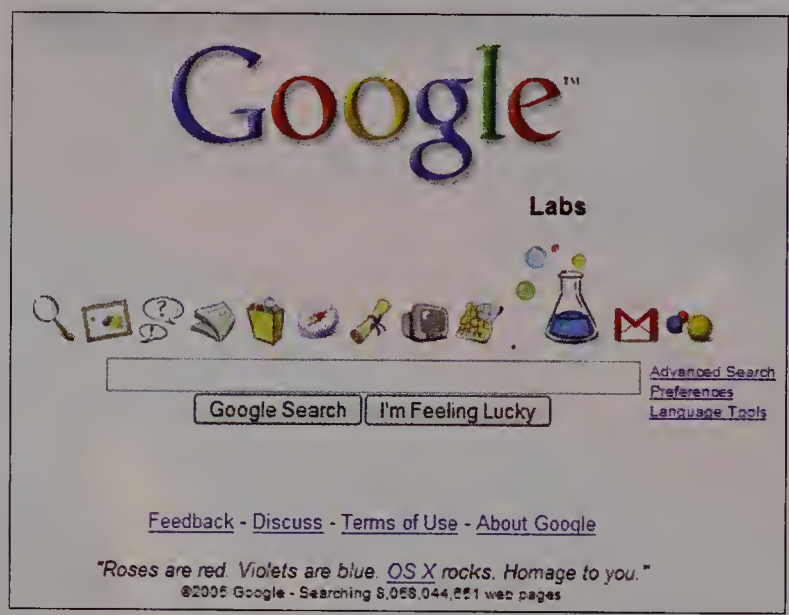
WONDER WHAT Yahoo looked like during the dot-com boom? Dial up the Wayback Machine (find.pcworld.com/48094), and you can view cached copies of popular Web sites dating back to 1996. For quick nostalgia trips, add a Wayback bookmarklet to your Firefox or Opera toolbar or Internet Explorer favorites; clicking the button will call up the archive of the site you're viewing.



TAKE A TRIP DOWN memory lane with the Wayback Machine. Here's the PCWorld.com site circa 1998.

Give Google a Face-Lift

GOOGLE OFFERS MORE than a dozen services, but most are hidden. The GoogleX interface (find.pcworld.com/48095) makes all of Google's goodies—such as Gmail, Froogle, Maps, and more—accessible via a nifty Mac OS X–like toolbar. Originally designed by a Google researcher, the toolbar disappeared shortly after being posted on the Google Labs site (most likely due to objections by Apple), but not before some plucky Netizens saved a copy for your use.



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YOU SAY YOUR ISP doesn't offer a Web interface for your e-mail inbox? Don't fret. With Mail2Web (www.mail2web.com) you can access any POP3 or IMAP4 account, read and respond to messages, and attach up to 10MB of files from any Web-connected computer. And don't worry, your mail will still be there ready to download when you get back to the office.

Find Uncle Sam's Hidden Files

HEAR THAT big sucking sound? It's thousands of documents disappearing from government Web pages—some removed due to national security concerns, and others for political reasons. But at sites like the Federation of American Scientists' Project on Government Secrecy (www.fas.org/sgp/), The Memory Hole (www.thememoryhole.org), and Cryptome (cryptome.org), you can find some of these missing files, along with other declassified but hard-to-find documents.

Create Your Own Reality TV Show

WHY SHOULD Paris Hilton and Donald Trump get all the glory? On ManiaTV (www.maniatv.com) you can submit your own 5-minute video clip; if it's picked, the site will devote an hour of programming to a video of your life. You can also send in clips from your mobile phone, or program an hour-long "mixtape" of your favorite video clips for broadcast online. This self-styled MTV (without the TV) claims 1 million unique visitors a month.

Travel by Kayak

THAT'S "Kayak" as in Kayak.com—a cool metasearch site that works like an in-house travel agency. A Google-like home page searches for flights, hotels, and cars from more than 100 different travel sites. Unique slider bars let you filter flights by time or price range; you can view all available airlines, airports, and hotel chains, or winnow down to just your favorites.

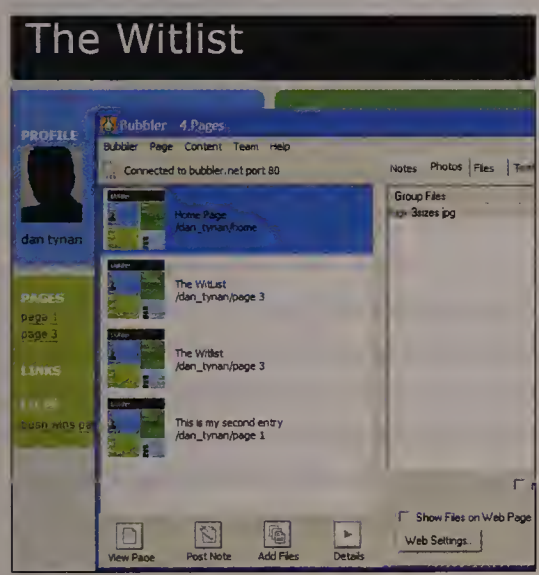
Tell the Truth in Secret

MAYBE YOUR BOSS has bad breath, or a close friend is in serious need of an ego trim. You can slip them a word in secret using Sharpmail's anonymous e-mailer (find.pcworld.com/48096). You can send your message in plain text or HTML, or you can send an SMS message to someone's cell phone. (But don't even think

about sending abusive or spammish mail, or Sharpmail will pull your free account.) Who knows? Maybe you'll receive an anonymous message taking you to task for your passive-aggressive e-mail tendencies.

Blog at Light Speed

WHEN YOU HAVE something to say right away, let Bubbler (www.bubbler.com) be your mouthpiece. This convenient blogging tool resides on your desktop, enabling you to post entries, publish images, and share files with just a few mouse clicks—no wading through multiple log-on windows or dealing with kludgy posting tools. Bubbler will host a simple text blog with 1MB of storage for free; paid options that allow you more storage space range from 10MB ($5 a month) to 4GB ($100 a month).



BUBBLER makes blogging easy, with a helpful desktop that handles file uploads.

Get Tech Help for Free

IF WINDOWS is having another bad hair day, but you're unwilling to spend $35 to be aggravated by Microsoft support, the Tech Support Guy (www.helponthe.net/) can help. Post your question to the site's two dozen forums or search more than 300,000 threads to find an answer. It's not as fast as a call to tech support, but it can be more fruitful and less frustrating. ▶

DESKTOP INFO

WEBIFY YOUR DESKTOP

WHY VENTURE OUT on the Net when it can come to you? You can festoon your desktop with "widgets" that pull information from your favorite Web sites.

The best-known widget program is Pixoria's Konfabulator ($25, www.konfabulator.com). It comes with more than a dozen prefab widgets, which run the gamut from practical (clocks, stock tickers, battery and Wi-Fi monitors) to whimsical (a "werewolf" widget that displays the phases of the moon). But the real widget wonderland is Pixoria's site, where users contribute their own creations for free. Here you'll find traffic and surf cams, train schedules, radio and RSS tuners, meters that display the locations of the cheapest gas in your area, an English-to-Swedish translator, a haiku generator, a Shakespearean Insult Kit, and the unblinking red eye of the HAL 9000 computer from *2001: A Space Odyssey,* complete with sound bites. And all that is just for starters.

To add a new widget to your desktop, right-click the Konfabulator icon in your system tray and select *Open Widget.* To download more items from the site, select *Get More Widgets.* To view all your widgets at once, select *Konsposé.* It doesn't get much simpler.

Stardock's DesktopX 3 ($15, find.pcworld.com/48008) features 23 widgets, including a language translator and an applet that can fetch the lyrics of virtually any song you might have a hankering to hear. The Standard ($25) and Professional ($70) versions come with tools that let you build your own widgets or overhaul your entire Windows desktop. Another place to find free stand-alone widgets, from clocks and calendars to abstract art generators, is at the Freeware Guide (find.pcworld.com/48009).

KONFABULATOR'S widgets can put all kinds of Web-based info on your desktop.

WEB APIs

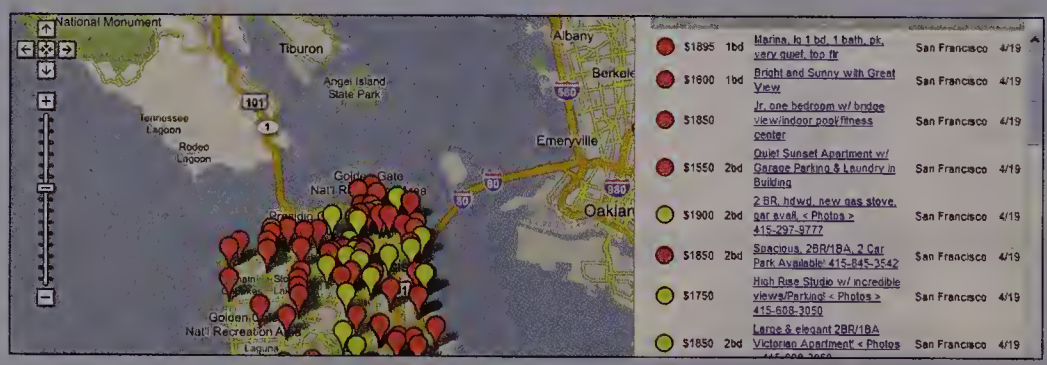
MAKE THE BIG SITES WORK FOR YOU

AMAZON AND GOOGLE are more than just Web sites—they're gigantic collections of useful data. The application programming interfaces (APIs) that access that data have enabled developers to build other amazing sites, and you can too if you're willing to hack a little code.

Amazon.com has more than 80,000 developers who use its API to build online shopping malls, as well as sites like Live Plasma (www.liveplasma.com), where you can search on a musician and view a groovy map showing related artists.

"We invite developers to be creative and innovative," says Amazon Web services evangelist Jeff Barr, "to take our data and do fun things with it."

It's not just Amazon. Dreamworks animator Paul Rademacher has combined data from Google Maps and Craigslist (www.craigslist.com) to create an interactive map that lets you find housing in markets across the country (www.paulrademacher.com/housing/). FlickrPaper (find.pcworld.com/48010) employs Flickr's API to let users build desktop wallpaper from Flickr's shared photo collection. First Floor Software used a Yahoo API to create an image search engine that displays results as a slide show (find.pcworld.com/48012). The Send to Smug Mug plug-in (find.pcworld.com/48014) enables users of Smugmug.com to send pics directly to the digital photography site by right-clicking an image inside Windows Explorer. And that's just a tiny sample of what's available.



TOGETHER AT LAST: Craigslist real estate postings cleverly plotted on a Google map.

To take advantage of a site's API, you need some knowledge of common Web programming tools. Google's downloadable API kit (www.google.com/apis/) contains a manual on how to use it, along with sample Java and .Net code. Flickr (www.flickr.com/services/api/) provides a wealth of APIs, as well as code samples. You'll find documentation and more for Amazon's APIs at find.pcworld.com/48060; Yahoo's is at developer.yahoo.net.

Even if you're not a code jockey, you can add Google or Amazon to your site. Simply copy a dozen lines of HTML code (www.google.com/searchcode.html) to add a Google search box to your home page. Selling Amazon products on your site for up to a 10 percent commission is nearly as easy. You'll have to sign up for the Amazon Associates program and copy some code to your home page. Then just wait for the money to roll in.

Hone Your Parenting Skills

ARE YOUR CHILDREN driving you up the wall? For $30 a month, About My Kids (www.aboutmykids.com) provides unlimited access to a personal parenting coach to answer your questions. You can talk with a coach via phone, e-mail, or live chat about your kids, whether they're toddlers or teens. So the next time your 15-year-old comes home with a scary piercing—or a scarier date—you'll know whom to call.

Increase Your Web Site's IQ

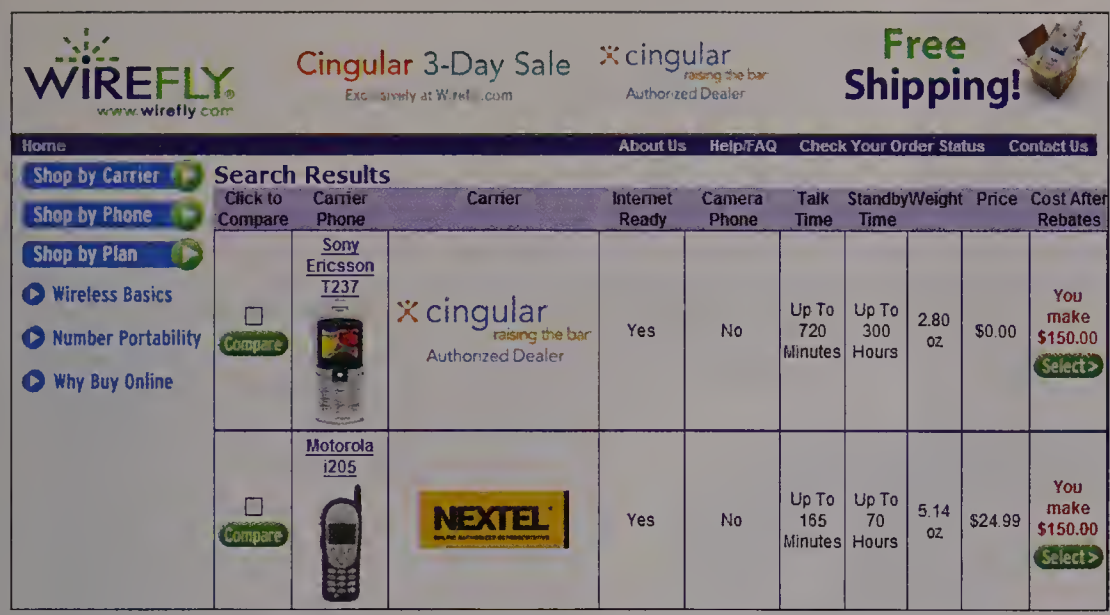
YOU TACKLE SOME meaty topics on your Web site. Now how are you going to explain all those arcane terms for the newbies? Answers.com provides a way to add definitions for any term. For example, to define the acronym "XML," add the link **www.answers.com/xml** whenever "XML" appears on your page. Simple, easy, and free.

Become an E-Marketing Mogul

FOR AS LITTLE AS $15 a month, Constant Contact (www.constantcontact.com) makes it a snap to create HTML-formatted e-mail newsletters, sign up visitors to your Web site, manage subscriber lists, find out who reads what you're sending out, and identify your most successful marketing campaigns. But don't even consider using it to send spam—Constant Contact monitors outgoing messages and will terminate your account at the first sign that you're abusing the service.

Never Take Another Boring Business Trip

WHY TAKE your dog-and-pony show on the road when you can hold it on the Web? At GoToMeeting (www.gotomeeting.com) you can display your slides, host live demos, or collaborate on documents while gabbing on the phone. GoToMeeting costs $50 a month for unlimited meetings of up to ten participants—a fraction of the cost of other online conferencing services, and a lot cheaper than a cross-country plane ticket. An even cheaper option is Microsoft's free (if ancient)



WIREFLY makes it easy to compare the service plans cell phone carriers offer in your area.

NetMeeting client, which lets you collaborate with other NetMeeting users. It's not installed in XP by default, so you'll have to search for "netmeeting" in XP's Help and Support and run a wizard to install it.

Compare Cell Plans

ARE YOU tied up in knots trying to unravel dozens of mobile phone plans? WireFly (www.wirefly.com) can untangle the mess. Just type in your zip code to search by carrier, phone, or plan. You can then sort your options by price, minutes, and type of coverage, and compare the plans in a side-by-side view. Charts include J.D. Power ratings for customer care and service plans, as well as WireFly's own rating of each carrier's market coverage.

Follow Your Money

IF YOU'VE EVER WONDERED where all your money goes, now you can find out. Where's George (www.wheresgeorge.com) literally tracks your dollars using the serial numbers on each bill. Whoever receives your greenbacks will have to log on to the site for you to track the dough, so you might want to write the URL on your bucks before you fork them over.

Unmask Spoofed Web Sites

THAT WEB SITE may look just like your bank's, but is it really? Find out by downloading Corestreet's free Spoofstick applet (www.corestreet.com/spoofstick/). It displays the real domain of the site in your browser toolbar, regardless of what the address window says—an invaluable tool for fighting phishers. The toolbar is available for both IE 6.*x* and Firefox 1.*x*.

Disinfect Your PC

IS YOUR ANTIVIRUS software on the fritz? Don't despair, just stop by Panda Software's site for a free system scan (find.pcworld.com/48006). You'll have to download an applet, surrender your e-mail address, and use Internet Explorer (the scanner requires ActiveX). Panda detects and disinfects most forms of malware, and will alert you to (but won't fix) spyware infestations.

Design Your Own Business Cards

FORGET ABOUT schlepping down to Kinko's to order business cards. At IPrint (www.iprint.com) you just choose a card template and start filling in text. You can pick fonts, colors, graphics, and paper, preview your work, and place an order with a few clicks. A box of 250 is $18 and up; you can also get matching letterhead, envelopes, labels, coffee mugs, and more.

Become a T-Shirt Titan

WANT A QUICK and easy way to promote your business? CafePress (www.cafepress.com/cp/info/sell/) will put your corporate logo on T-shirts, caps, coffee mugs, mouse pads, and more. You can give the items away to customers or sell them directly from a CafePress-powered page on your site. The site handles everything from production to payment, and then gives you a cut of each sale.

Charter a Private Jet

SO YOU STRUCK it rich selling Furbies on EBay and now you want to travel in style. At Charter Auction (www.charterauction.com), you can rent a private jet starting at $2100 an hour. Plug in your departure and arrival information, and private jet owners will bid for your business. (You'll have to put $100,000 in an escrow account before you can book a flight.) A typical round trip from New York to San Francisco runs about $30,000. Pricey, but a great way to impress prospective clients.

Shop for the Best Advertising Venue

ADVERTISING ON THE Web doesn't have to be complicated. Adbrite (www.adbrite.com) makes buying banner ads as easy as shopping at Amazon.com. Just pick a site where you want your ad to appear, and add it to your shopping cart. Prices range from 1 cent per click to $6000 for a ▶

IT DOESN'T COME CHEAP, but you can charter your own private jet at Charterauction.com.

week-long text ad campaign, depending on the site you're targeting. You can also sell ad space on your site to others; Adbrite takes 25 percent of the cut.

Hire a Nag

THERE WAS SOMETHING I wanted to tell you...now, what was it again? Oh, yeah—it was about RemindMe.com (www.remindme.com). This nifty service pops up a window on your computer for those crucial events (birthdays, anniversaries, tee times) when relying on a personal organizer just isn't enough. The stand-alone package costs $25, but a free (ad-supported) e-mail version should be available by the time you read this.

Become a Blog Snob

IT DOESN'T MATTER how brilliant your blog is if your mom is your only reader. Get the word out with Pheedo's Blogsnob (pheedo.com/publishers/signup.html). Simply add a small piece of JavaScript code to your blog template and create a pithy, one-sentence ad that will appear on other blogs in Pheedo's network. The service works with blogs created in Blogger and TypePad (but not LiveJournal).

Get Surreal

IS YOUR Web site a tad, well, dull? Ravenblack's random surrealism generator (www.ravenblack.net/random/surreal.html) will spark it right up. Just copy the site's free HTML code to your home page template. Each time your page loads, it will display a different Dali-esque comment ("A saucepan a day keeps the banana away"). Words to live by.

Take Your Business to the Next Level

YOUR SMALL BUSINESS could be the next Amazon.com—if you don't get lost in the business jungle first. Let StartupNation (www.startupnation.com) be your guide. Budding entrepreneurs can find reams of free advice, success stories, online seminars, and more from radio hosts and small-business consultants Rich and Jeff Sloan. You can also buy business plan software, obtain insurance, and hire a branding consultant.

Make High School Cool

DO YOUR TEENS need to take courses that their local school doesn't offer? Enroll them at either the Virtual High School (www.govhs.org) or the Florida Virtual School (www.flvs.net). Your child can take a single course or a series of them across a wide range of topics. These fully accredited learning institutions educate thousands of students nationwide, but in order for your children to get class credit on their transcripts, they will need to sign up through their high school. ▶

PODCASTING

BE YOUR OWN SHOCK JOCK

YOU DON'T NEED a mellifluous voice or wild hair to become a cybermedia star. All you require are some podcasting tools.

To start, you need audio software, such as Audacity (free, audacity.sourceforge.net/) or IPodcast Producer ($150, www.industrialaudiosoftware.com), that records MP3 files. (You can also use Windows Sound Recorder to record .wav files, and then convert them to MP3s using a program like Musicmatch Jukebox.) Once you've recorded your file, you'll have to enclose it in an RSS feed, and upload it to your blog or Web site.

But for my money, the easiest route to podcasting is Audioblog.com ($5 a month or $50 a year, www.audioblog.com). Here you'll find everything you need in one easy bloglike interface. For example, to record a podcast, you just log in and click the *Audio* tab, and then *Record New Audio Post*. Click *Allow* to let the site access your microphone or camera, followed by *Begin* and then *Record*. When you're done, click *Stop* and enter a title and description for your recording; then click *Save*. On the next page, click *Publish Audio*, and then select the blog or RSS feed you want to publish it to. It's that simple.

In fact, you don't even need a computer to begin your podcasting career. You can dial a number, record entries via phone, and then automatically post them to your blog. And if you want the world to see as well as hear you, Audioblog can do the same thing for video files captured via Webcam. Stardom is just a click away.

AUDIOBLOG.COM makes podcasting easy by handling both recording and posting.

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Clean Out Your Garage (and Fill It Back Up)

GOT BOXES OF OLD LPs or baseball cards you don't know what to do with? Swap 'em for something you like better at SwapThing (www.swapthing.com). You can swap items such as music, art, trading cards, and old schoolbooks, or offer them for sale. You can list items for free; the site charges each party a buck for every item swapped or sold. It's easier and cheaper than auctioning them on EBay.

THE BARTER SYSTEM makes a comeback at SwapThing.com.

Hire a Virtual Office Manager

RUNNING A SMALL business means having to know a little bit about everything. Need to whip up a marketing plan or write a human resources manual? SmartOnline (www.smartonline.com) provides the know-how and the tools. You can purchase a passel of bread-and-butter business services for $30 a month or order them à la carte. The site also offers a handful of free tools, such as an online calendar, address book, and currency converter.

Download Tunes While You Drive

YOU'RE IN YOUR CAR and a great song comes on the radio, but by the time you get home you've totally forgotten the band's name. With Music On Command (www.musiconcommand.com) you can buy the tune instantly. Just dial a toll-free number and punch in the station's call letters; the site sends an e-mail or SMS with a link to a store where you can download the song. At press time the service was still in beta testing, and songs were available through Buy.com for $1 apiece. The service covers more than 1200 radio stations in North America; support for Sirius and XM satellite radio is in the works.

Publish Your Masterpiece

SO YOU'VE COMPLETED your 1000-page opus but can't find a publisher? Do it yourself on Lulu.com (www.lulu.com). Unlike most self-publishing sites, Lulu charges no up-front fees and requires no minimum orders. Just upload a word processing document and follow a wizard to choose the book's size, format, cover art, and price or commission. Lulu takes 20 percent of the cover price. You can sell your book via Lulu, Amazon.com, Barnes & Noble, or your own Web site. If you order copies for yourself, you pay only binding and printing costs—around $8.50 for a standard 200-page paperback.

Find Out How Much Time You Have Left

WE ALL HAVE to go sometime—and the DeathClock (www.deathclock.com) purports to tell you precisely when. Just plug in your birth date, gender, height, and weight; the site predicts the day of your demise based on average life expectancy, and even displays a ticker that counts down to the big day in seconds. ■

Contributing Editor Dan Tynan is the author of Computer Privacy Annoyances *(O'Reilly Media, 2005). He also writes* PC World's Gadget Freak *column.*

IN THE MONEY

MAKE $$ FROM YOUR SITE

JUST BECAUSE YOU missed the dot-com boom doesn't mean the gravy train has passed you by completely. Here are a handful of ways you can make your Web site pay for itself and maybe bring in a little bit of extra cash as well.

- **Text ads:** Programs like Google AdSense (www.google.com/ads/index.html) let you carry text ads relevant to your site's content. Every time a visitor views or clicks an ad, you'll earn a few pennies.
- **Affiliate programs:** Many online merchants depend on networks of affiliate sites to move product. Affiliate aggregators like LinkShare (www.linkshare.com) or Commission Junction (www.cj.com) let you pick from hundreds of affiliate advertisers, some offering commissions as high as 40 percent.
- **Subscriptions:** Is your Web content worth paying for? You could charge users for access. But be aware that subscription management services like VisionGate (www.visiongateportal.com) or MemberGate (www.membergate.com) can cost from a few hundred to several thousand dollars a month, depending on the number of subscribers.
- **Self-publishing:** Aaron Gleeman, editor in chief of the Hardball Times baseball site (www.hardballtimes.com), used a more traditional method of generating income from his hobby. He published a couple of books, including *The Hardball Times Baseball Annual,* through Lulu Press (www.lulu.com). The royalties allow him to pay his writers a small stipend and to make a comfortable if not cushy living.

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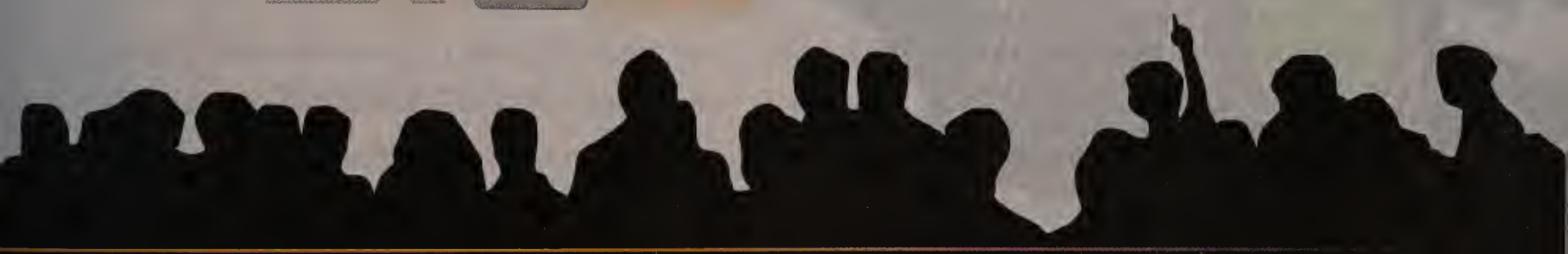

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THE 100 BEST PRODUCTS of 2005

When you're buying hardware, software, and services, you want the top combination of power, features, reliability, and value. That's what you'll find in these World Class Award winners—starting with the Product of the Year.

WHAT MAKES A PRODUCT GREAT? For 22 years, we've answered that question in the form of our World Class Awards. The products, technologies, and categories keep changing. But in 2005, as in 1983, great products meld practical features with innovation. They help you rather than annoy you. And they do it at a fair price. This year we chose 100 tools—the most in years—for work, home, and everywhere in between. Then we ranked them from 1 to 100. The resulting honor roll is as wide-ranging as today's world of personal technology. (And 23 of our 100 winners have the best price of all: They're free.) For more details on all these picks, visit find.pcworld.com/48080.

BY THE EDITORS OF *PC WORLD*

PHOTOGRAPHS BY MARC SIMON

Firefox

[1]

PRODUCT OF THE YEAR

Mozilla Firefox

WEB BROWSER (Free) Let the browser wars begin anew: This open-source program is streamlined, customizable, and just plain better. No wonder it has attracted millions of users in just a few months. Is it merely a coincidence that Microsoft finally plans to give the aging Internet Explorer the major overhaul it has needed for years?

THE WINNERS ARE...

[2] Google Gmail

WEB MAIL (Free) Fast, simple, and with 2GB of storage, it has the elements of a paid service, delivering messages sans pesky graphical ads.

[3] Apple Mac OS X Version 10.4 (Tiger)

OPERATING SYSTEM ($129) Version 10.4 adds a whip-smart desktop-search tool and a number of other gee-whiz features to what was already a well-engineered Mac operating system.

[4] Belkin Wireless Pre-N Router and Notebook Network Card

WIRELESS NETWORKING (Router $160, network card $110) They offer dramatically faster speeds and better range than their 802.11g predecessors.

[5] Dell UltraSharp 2405FPW

24-INCH WIDE-SCREEN LCD ($1019) Not only is this monitor easy on the eyes, but its category-shaking price tag is easy on the wallet, too.

[6] Alienware Aurora 5500

PERFORMANCE PC ($3500) Currently our speed-record-holding desktop system. Look no further if you want a blazingly fast PC.

[7] Seagate USB 2.0 Pocket Drive

PORTABLE HARD DRIVE ($140) The hefty 5GB of storage lets you carry loads of files on the go.

[8] Skype

VOIP SERVICE (Free) PC-to-PC phone calls have never sounded so good—plus, it's easy to set up.

[9] Canon EOS Digital Rebel XT

DIGITAL SLR CAMERA ($899) It's an impressive upgrade to the camera that brought single-lens reflex photography to the masses. This 8-megapixel model's lightweight design makes it a standout in the expanding field of SLRs.

[10] PalmOne Treo 650

PDA PHONE ($450 with service activation) Yes, it could use more memory and maybe Wi-Fi, too, but it's still the best PDA phone around.

[11] Zone Labs ZoneAlarm Antivirus

ANTIVIRUS AND FIREWALL SOFTWARE ($25) Take the premier software firewall, pair it with Computer Associates' capable antivirus program, and you have a winning combination.

[12] Mysoft Technology Maxthon

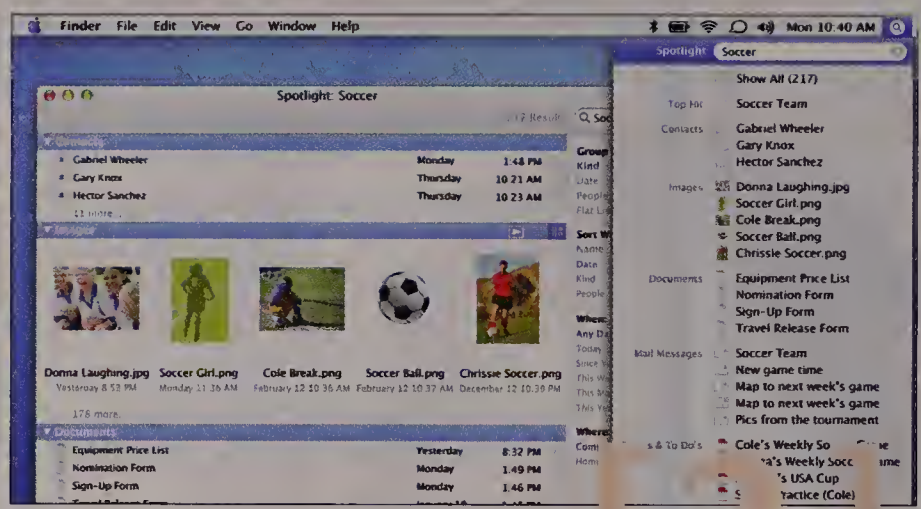
BROWSER PLUG-IN (Free) Add oomph to Internet Explorer: Jump between pages in a tabbed interface, block ads, and pick from 300 skins.

[13] Rio Carbon

MIDCAPACITY MP3 PLAYER ($200 for 5GB, $229 for 6GB) A price drop on this great-quality audio player makes it even more attractive.

[14] Webroot Window Washer 5.5

UTILITY ($30) It wipes out file histories, browser cookies, cache contents, and other remnants. ▶



Apple Mac OS X Version 10.4

Tiger's big new addition is Spotlight, a speedy, well-integrated tool for searching your hard drive. And it's the best-looking OS around. In other words, Mac fans are already enjoying the cool features that Windows won't deliver until late 2006.

POWER COMPUTING

A PC need not be boring: Our picks bring good looks, optimum performance, and dependability.

[6]

Alienware Aurora 5500

Powered by a very capable 2.6-GHz Athlon 64 FX-55 processor, the Aurora 5500 embodies what Alienware does best. Quick and well designed, it exudes a sophisticated cool that will appeal to many users.

[66]

Shuttle Computer XPC i8600b

Striking a terrific balance between compactness and expandability, the XPC packs many of the features of a full-size desktop computer.

[15] Maxtor H01R300 Shared Storage Drive

NETWORK HARD DRIVE ($360) Drive adds 300GB of centralized storage to a home or office network.

[16] Google

SEARCH ENGINE (Free) The king of search continues to introduce important innovations—such as Google Maps, Google Answers, and Google Scholar—while maintaining a clean interface.

[17] Netgear 54 Mbps Cable/DSL Wireless Travel Router Model WGR101

TRAVEL ROUTER ($80) Give yourself the freedom to wander about 30 feet from an ethernet jack and to create your own secure Wi-Fi network.

[18] OnlyMyEmail Pro

SPAM FILTER ($3 a month) Service filters spam from up to three e-mail accounts. In our tests it caught more than 99 percent of unsolicited mail.

[19] Sony PlayStation Portable

HANDHELD GAMING DEVICE ($250) The innovative PSP doubles as a personal video player.

[20] NVidia GeForce 6600 GT

GRAPHICS BOARD ($180) The 6600 GT supplies most of the 3D graphics muscle of the higher-end 6800 Ultra at less than half the price.

[21] APC Back-UPS RS 800VA 120V

UNINTERRUPTIBLE POWER SUPPLY ($150) A real savior in an outage, it also fixes over- and undervoltage without even engaging its battery.

[22] 2BrightSparks SyncBackSE

UTILITY ($15) It backs up, restores, and synchronizes files—even when they're locked or open—to multiple locations such as networked drives.

[23] Moon Software Password Agent

PASSWORD MANAGER (Free for up to 25 log-ins, $25 for unrestricted version) Keep track of your passwords with this frugal and utilitarian tool.

[24] HP Officejet 7210 All-in-One

MULTIFUNCTION PRINTER ($300) Print speed and quality make this versatile office tool a winner.

[25] Winternals Software ERD Commander

DATA RECOVERY SOFTWARE ($149) It boots from CD to diagnose problems or to take data off a dead system (or to put data back on to help revive one).

[26] Ubuntu Linux 5.04

LINUX DISTRIBUTION (Free) With a bit of tinkering, you end up with the slickest Linux around.

[27] Epson PictureMate

PHOTO PRINTER ($199) You get fine snapshot prints at a low cost: 23 cents each in our tests.

[28] Mozilla Thunderbird

E-MAIL PROGRAM (Free) This client gives you useful features such as fast search capability and an RSS reader. It's great at blocking spam, too.

[29] **Cloudmark Anti-Fraud Toolbar**
BROWSER SECURITY PLUG-IN (Free) Use it to block sites and IP addresses that try to install malware or that host ads appearing in spam messages.

[30] **Vonage**
VOIP SERVICE (Starts at $15 per month) Vonage stands out for its dependable service and first-rate call quality. Plus, the company has plans to roll out enhanced 911 (E-911) soon.

[31] **Cloudmark SafetyBar**
SPAM FILTER ($40 a year) It garnered one of the best antispam filter accuracy rates in our tests.

[32] **Adobe Photoshop CS2**
IMAGE EDITOR ($599) Artists will like the new photo tricks that further streamline their tasks.

[33] **The New York Times on the Web**
WEB SITE (Free) NYTimes.com serves up great content, a clear layout, and interactive features.

[34] **Apple ITunes**
MEDIA PLAYER (Free) It's great at letting you legally share music with others on the same network. Oh, and did we mention it works with the most popular audio player on the planet?

[35] **Seagate USB/FireWire Hard Drive**
EXTERNAL HARD DRIVE ($350) This 400GB hard drive is a breeze to install and use, and you can configure it in a multidrive stack.

[36] **Canon CanoScan 9950F**
SCANNER ($400) The 9950F offers fast, crisp, colorful scans; a built-in transparency adapter; and three film holders for scanning multiple photos.

[37] **IRiver IFP-895**
FLASH-BASED MP3 PLAYER ($150) An FM tuner with scheduled recording, a voice recorder, and both line- and microphone-level inputs make this player more talented than the IPod Shuffle.

[38] **Valve Half-Life 2**
PC GAME ($55) Half-Life 2 skillfully blends elements of sci-fi, horror, adventure, and puzzle-solving into a seductive productivity-killer.

[39] **Samsung HL-P5063W**
REAR-PROJECTION TV ($2500) This svelte 50-inch DLP HDTV set delivers sharp images and terrific sound quality. And it's stylishly designed, too.

[40] **Tor**
PRIVACY SOFTWARE (Free) Its onion routing service strips away information from Internet data packets that might reveal your identity while you are browsing. Tor goes a step further than paid competitors, anonymizing your e-mail, IM, IRC chat, or any other TCP/IP network data.

[41] **LG Flatron L1981Q**
19-INCH LCD ($499) Pivoting this sleek LCD autocorrects the image to display right side up. ▶

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[5]

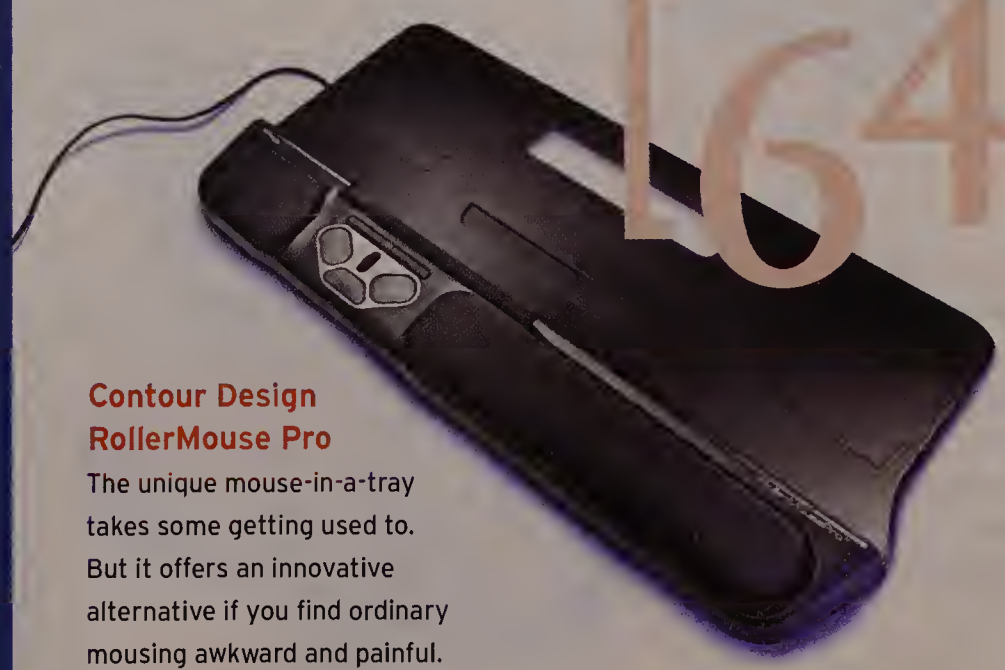
Dell UltraSharp 2405FPW
This big beauty is designed with entertainment inputs that let you hook it up to such devices as DVD players and digital video recorders.

HP Officejet 7210 All-in-One
Great print quality, fast copying, and built-in networking make this multifunction printer an indispensable office workhorse.

[24]

PERIPHERALS

Whether they handle one task or many, the best add-ons are just as essential as your PC itself.



[64]

Contour Design RollerMouse Pro
The unique mouse-in-a-tray takes some getting used to. But it offers an innovative alternative if you find ordinary mousing awkward and painful.

[71]

Seagate USB 2.0 Pocket Drive
Don't be put off by this drive's hockey-puck design. The device carries 5GB of data efficiently and safely.

[15]

Maxtor H01R300 Shared Storage Drive
This slick-looking external drive adds 300GB of centralized storage to an existing network. The device's Drag and Sort feature supports quick, general organization of your data.

STORAGE PRODUCTS

The latest data keepers are well designed, have humongous capacities, and keep files safe.

[73]

Plextor PX-716UF
Top speed, sleek design, and a useful software bundle propel this external DVD burner onto our list. It connects to a computer via USB 2.0 or FireWire.

[42] Dell 3000cn

COLOR LASER PRINTER ($449) This workgroup printer delivers crisp text and solid graphics.

[43] BlackBerry 7100t

PDA PHONE ($300) BlackBerry users finally get a real phone with the 7100t, as well as an innovative and highly effective predictive text-entry system that works with only a few more keys than a regular phone keypad uses.

[44] Verbatim Store 'n' Go Pro

USB MEMORY KEY ($190) This 2GB flash drive speeds its way through data transfers. It includes security and file-synchronization software, too.

[45] Seagate Barracuda 7200.8 SATA NCQ

INTERNAL HARD DRIVE ($350) Seagate's Serial ATA drive gives you more than enough performance for desktop use. Its native command queuing adds to its smarts—and performance potential—in server applications.

[46] Compaq Presario V2000

ALL-PURPOSE NOTEBOOK (Starts at $780) The versatile V2000 offers a sleek profile, a bright 14-inch wide screen, and superlong battery life.

[47] Microsoft Windows Media Player 10

MEDIA PLAYER (Free) Version 10 combines a compact interface with an innovative DRM technology for enabling music subscriptions that you can take with you on your MP3 player.

[48] Canon Pixma IP4000R

INKJET/PHOTO PRINTER ($230) The IP4000R provides Wi-Fi, fast speeds, and great print quality.

[49] Best Software Simply Accounting

ACCOUNTING AND PERSONAL FINANCE ($50 for Basic, $300 for Pro) Software offers headroom to satisfy businesses with complex requirements.

[50] Orb

MEDIA STREAMING SERVICE (Free) This clever service streams music, video, and image files from your desktop to phones, PDAs, and notebooks.

[51] Flickr.com

PHOTOGRAPHY SITE (Free) Post snapshots or rummage through other people's collections.

[52] Dell Inspiron 6000

DESKTOP REPLACEMENT NOTEBOOK ($1369) A 15.4-inch wide screen, swift performance with a 2-GHz CPU, and a slew of ports make the 6000 a very capable alternative to a desktop machine.

[53] DirecTV HD DVR HR10-250

HD RECEIVER AND DVR ($999) This combo allows you to record two HD shows at once and watch another, prerecorded show simultaneously.

[54] ACD Systems ACDSee 7

PHOTO ORGANIZER ($50) Use this fast, feature-rich program to manage your photo inventory.

[55] Dell UltraSharp 1704FPV

17-INCH LCD ($349) The 1704FPV puts all the parts together: a great screen, an adjustable stand, and USB 2.0 ports—at a bargain price.

[56] Olympus C-8080 Wide Zoom

DIGITAL CAMERA ($699) With sturdy design and lots of controls, this is for serious shutterbugs.

[57] Qnext

INSTANT MESSENGER (Free) Not only does Qnext bring all your IM services together, it puts file sharing, photo sharing, music streaming, and games into the same interface.

[58] IBM ThinkCentre A51p

ALL-PURPOSE PC ($1627) Easy-access design and advanced security features distinguish this good-looking, all-business black tower.

[59] SightSpeed

VIDEO INSTANT MESSENGER ($5 a month, $50 a year) Its lip sync is unbeatable on one-to-one calls, and it's above average on multiparty calls.

[60] Wikipedia

ONLINE RESOURCE (Free) Constantly updated and self-policed, this collaborative online encyclopedia offers insight into almost everything.

[61] Cerulean Studios Trillian 3.1

INSTANT MESSENGER (Free) A universal client, Trillian works with AIM, MSN Messenger, Yahoo Messenger, and other IM networks. Version 3 adds audio and video chat, plus links to the Wikipedia online encyclopedia.

[62] CMS 80GB USB 2.0 ABSplus Notebook Backup System

PORTABLE HARD DRIVE ($399) This supercompact portable hard drive is easy to tote around for backups on the go. Integrated backup software and a built-in USB 2.0 connector seal the deal.

[63] Nikon Coolpix 7900

DIGITAL CAMERA ($450) Point-and-shoot photography at its best: It weds simplicity and great imaging in a light, compact camera that features exposure and white-balance bracketing controls.

[64] Contour Design RollerMouse Pro

MOUSE ($200) This one-of-a-kind input device is a great alternative to a traditional mouse. You move the RollerMouse pointer by shifting the rotating bar up and down, and side to side. It comes with a scroll wheel, as well as right-click, left-click, double-click, and changeable buttons.

[65] Adobe InDesign CS2

DESKTOP PUBLISHER ($699) Adobe gives QuarkXPress users some serious reasons to consider switching: finer controls for text and paragraph styles, enhanced tools for object manipulation, and as-you-type spelling check. ▶

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[10]

PalmOne Treo 650

A bright, high-resolution screen; a more-functional keyboard; and a removable, rechargeable battery are its key improvements over the previous model.

MOBILE TOOLS

You won't miss the office if you're traveling with any of these slick and powerful portable devices.

[46]

Compaq Presario V2000

This all-purpose notebook with a great keyboard and a 14-inch wide screen would be at home on your desk or on the road.

Motorola Razr V3

A svelte, innovative design; a large, vibrant screen; and a sturdy metal housing make the Razr one of the most attractive phones around.

[90]

[27]

Epson PictureMate
Portable printer produces high-quality prints at a reasonable price (23 cents each in our tests) and conveniently writes files from a media card to your external burner.

[32]

Adobe Photoshop CS2
New features, including Vanishing Point (which clones elements that automatically match the perspective of the surrounding image), keep Photoshop the once and future king of image editing.

DIGITAL PHOTOGRAPHY

With these innovative imaging tools, you can shoot, edit, and print picture-perfect snapshots.

[56]

Olympus C-8080 Wide Zoom
If you don't want to spring for a digital single-lens reflex camera, this model is a superb choice. We like its 8-megapixel imaging, 5X optical zoom lens, and huge selection of manual exposure controls.

[66] Shuttle Computer XPC i8600b

SMALL PC ($1611) Balancing size and expandability, it will appeal to folks who want a PC that can grow with them without taking up much space.

[67] IBM ThinkPad X41

ULTRAPORTABLE NOTEBOOK ($2249) Offering arguably the best keyboard around, this lightweight notebook trumps the competition with a built-in fingerprint reader—for extra security—and a full-featured docking station.

[68] Adobe Premiere Elements

VIDEO EDITOR ($99) Premiere Elements combines a friendly interface with a wide selection of video templates, effects, and transitions.

[69] Dell Axim X30

PDA ($199) A 312-MHz processor powers this versatile and very affordable PDA. Connectivity options include Wi-Fi and Bluetooth.

[70] A9.com

SEARCH ENGINE (Free) Amazon's clever A9 search engine and toolbar starts with Google results. But it does Google one better with features like auto-syncing bookmarks, a search history, and amazing photo-based Yellow Pages.

[71] Toshiba RS-TX20 Digital Media Server

DVD RECORDER ($500) A more capable alternative to TiVo, the RS-TX20 archives video to discs, and stores files in its 120GB hard drive as well.

[72] Roxio Easy Media Creator 7.5

BURNING SOFTWARE ($100) Roxio EMC's easy-to-navigate interface simplifies burning tasks. This update broadens the suite's scope by adding the full version of BackUp MyPC 6 Deluxe.

[73] Plextor PX-716UF

REWRITABLE DVD DRIVE ($239) This external USB 2.0– and FireWire-enabled burner—and the internal version, the $139 PX-716A—rank among the fastest DVD drives in their class.

[74] Casio Exilim EX-Z750

DIGITAL CAMERA ($400) The extremely compact, 7.2-megapixel Exilim EX-Z750 brings you sharp photos, a 2.5-inch LCD, long battery life, and an intuitively navigable on-screen menu.

[75] Apple Mac Mini

SMALL PC (Starts at $499) Tiny, elegant, quiet, and inexpensive, Apple's latest inventive machine could turn you into a Mac user.

[76] Google Desktop Search

DESKTOP SEARCH TOOL (Free) It does a speedy job of retrieving the results you want, but it could use a better way of paring down your results.

[77] Mitsubishi LT-3050

30-INCH LCD TV ($3800) This television touts a vibrant screen and impressive sound quality. ▶

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Now you can handwrite text or draw pictures with the convenience of pen-based technology or issue commands with the sound of your voice.
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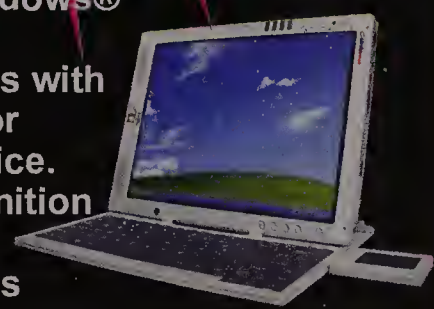

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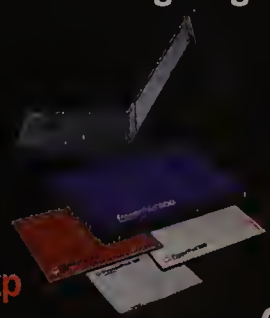

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Corsair 1024 MB PC3200 DDR400 MEMORY
200 GB Serial ATA 150 7200 RPM HD 8mb Cache
16X PCI-Express Nvidia Geforce 6800 GT 256MB DDR3 by XFX
17" Viewsonic VA7128 8MS Gaming LCD Display
LG 16X DVD-ROM
LG 16X DVD+-RW Drive
Nforce-4 7.1 3-D Surround Sound
Creative Cambridge Inspire P7800 7.1 Surround Sound System
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard
Microsoft® Optical intelli Explorer Mouse
Aluminum X-Navigator Server Tower Case 420W w/ MOD "See Through Windows"
Microsoft® Windows® XP Professional X64 648it OS

AMD Athlon™ 64

FX55	CPU	$ 2309	CAF701
4000+	CPU	$ 1935	CAF702
3800+	CPU	$ 1815	CAF703
3500+	CPU	$ 1685	CAF704
3200+	CPU	$ 1599	CAF706
3000+	CPU	$ 1549	CAF707

$1,549

GAMER ULTRA 6000 DREAM

Nvidia nforce-4 Chipset MB w/ 16X PCI Express
Corsair 512 MB PC3200 DDR400 MEMORY
160 GB Serial ATA 150 7200 RPM HD 8mb Cache
Nvidia Geforce 6600 256MB DDR W/ TV out Powerd by XFX
LG 16X DVD-ROM
LG 16X DVD+-RW Drive
Nforce-4 7.1 3-D Surround Sound
Creative Cambridge Desk Top Theater 5.1 S560 5.1 Surround Sound
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard and Logitech Optical Wheel mouse
Nzxt Nemesis Tower Case 425W w/ MOD "See Through Windows"
Microsoft® Windows® XP HOME Edition w/ SP 2

AMD Athlon™ 64

FX55	CPU	$ 1575	CAG701
4000+	CPU	$ 1209	CAG702
3800+	CPU	$ 1089	CAG703
3500+	CPU	$ 959	CAG705
3200+	CPU	$ 875	CAG707
3000+	CPU	$ 829	CAG708

$829

GAMER ULTRA 7000 ELITE

Nvidia nforce-4 Chipset MB with 16X PCI Express
Corsair 512 MB PC3200 DDR400 MEMORY
160 GB Serial ATA 150 7200 RPM HD 8mb Cache
Nvidia Geforce 6200 Turbo Cache Supporting 256MB Powerd by XFX
LG 16X DVD+-RW Drive
NFORCE-4 7.1 3-D Surround Sound
600Watts Subwoofer Speaker System
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard & Logitech Optical Wheel mouse
Microsoft® Windows® XP HOME Edition w/ SP2
Turbo X-Cruiser Case 420 Watt with See Through Windows

AMD Athlon™ 64

FX55	CPU	$ 1415	CSE701
4000+	CPU	$ 1055	CSE702
3800+	CPU	$ 939	CSE703
3500+	CPU	$ 809	CSE704
3200+	CPU	$ 725	CSE706
3000+	CPU	$ 679	CSE707

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LG 16X DVD+-RW Drive & 16X DVD-ROM
Creative Labs Sound Blaster Audigy 2 ZS 7.1 Sound w/ IEEE
Creative Cambridge Inspire P7800 7.1 Surround Sound System
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard
Microsoft® Optical Intelli Explorer Mouse
Asus Vento 3600 Xtreme Gaming Case w/ 500 Watt Power Supply
Microsoft® Windows® XP Professional X64 64 Bit OS

AMD Athlon™ 64

FX55	CPU	$ 2609	CSL701
4000+	CPU	$ 2239	CSL702
3800+	CPU	$ 2125	CSL703
3500+	CPU	$ 1995	CSL704
3200+	CPU	$ 1909	CSL707
3000+	CPU	$ 1859	CSL708

$1,859

GAMER ULTRA 9000 PRO

Nvidia nforce-4 Chipset MB w/ 16X PCI Express
Corsair 1024 MB PC3200 DDR400 Memory
200 GB Serial ATA 150 7200 RPM HD 8mb Cache
6X PCI-Express Nvidia Geforce 6600GT 128MB Video Card w/ TV out & DVI Powered by XFX
LG 16X DVD-ROM
LG 16X DVD+-RW Drive
Nvidia Nforce-4 3D 7.1 Surround Sound
Creative Cambridge Desk Top Theater 5.1 SBS 560 5.1 Surround Sound Speakers
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard and Logitech Optical Wheel Mouse
Nzxt Nemesis Tower Case 425W w/ MOD "See Through Windows"
6 Cool Custom Colors to Choose From
Microsoft® Windows® XP Home Edition w/SP2

AMD Athlon™ 64

FX55	CPU	$ 1685	CAJ701
4000+	CPU	$ 1319	CAJ702
3800+	CPU	$ 1199	CAJ703
3500+	CPU	$ 1069	CAJ705
3200+	CPU	$ 985	CAJ707
3000+	CPU	$ 935	CAJ708

$935

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Gigabyte GA-K8NX nForce-3 250 MB w/ 8X AGP
Corsair 512 MB PC3200 Dual Channel DDR400 Memory
160 GB 7200 RPM Hard Drive
Nvidia Geforce-FX 5200 128MB 8X AGP VIDEO Powerd by XFX
LG 16X DVD+-RW Drive
Nvidia Nforce-3 3D 5.1 Surround Sound
600 Watt Subwoofer Speaker System
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard and Logitech Optical Wheel mouse
Turbo X-Plorer Case 420 Watt w/ "See Through Windows"
6 Cool Custom Colors to Choose From

AMD Athlon™ 64

FX55	CPU	$ 1269	CAJ701
3800+	CPU	$ 795	CAJ702
3700+	CPU	$ 729	CAJ703
3500+	CPU	$ 665	CAJ704
3400+	CPU	$ 615	CAJ705
3200+	CPU	$ 579	CAJ706
3000+	CPU	$ 535	CAJ707
2800+	CPU	$ 509	CAJ708

$509

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Microsoft® Windows® XP HOME Edition w/ SP2
Turbo X-Cruiser Case 500 Watt with See Through Windows.
6 Cool Custom Colors to Choose From

AMD Athlon™ 64

FX55	CPU	$ 1919	CSE701
4000+	CPU	$ 1569	CSE702
3800+	CPU	$ 1445	CSE703
3500+	CPU	$ 1315	CSE704
3200+	CPU	$ 1229	CSE707
3000+	CPU	$ 1185	CSE708

$1,185

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Philip Remote Control
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AMD Athlon™ 64

FX55	CPU	$ 1499	CMD701
3800+	CPU	$ 1025	CMD702
3500+	CPU	$ 895	CMD704
3200+	CPU	$ 789	CMD706
3000+	CPU	$ 745	CMD707

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Nvidia Geforce 6600 256MB DDR W/ TV out Powerd by XFX
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LG 16X DVD+-RW DRIVE
Nforce-4 7.1 3-D Surround Sound
17" Super Slim LCD DISPLAY
Logitech X530 5.1 Subwoofer sperakers
6 IN 1 Digital Media Reader
Logitech Deluxe 104 Keyboard and Logitech Optical Wheel mouse
Turbo X-Cruiser Case 420 Watt with See Through Windows
Microsoft® Windows® XP HOME Edition w/ SP2

AMD Athlon™ 64

FX55	CPU	$ 1755
4000+	CPU	$ 1395
3800+	CPU	$ 1275
3500+	CPU	$ 1149
3200+	CPU	$ 1065
3000+	CPU	$ 999

$999

AMD 64 Athlon FX

AMD 64 Athlon

- Provides leading-edge 32-bit performance for music, video and games and is ready for future 64-bit software
- Improves security against certain types of viruses, with Enhanced Virus Protection for Microsoft® Windows® XP SP2.

- Conserves power and operates quietly with AMD Cool n'Quiet™ technology.
- Features HyperTransport™ technology for improved multitasking performance

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17" WSXGA Wide-Screen TFT Display 1680x1500 Pixels
16X/8X CD-RW/ DVD+- RW Combo Drive
10/100 Network Card & 56K V.92 Modem
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1 PCMCIA Type II Slot
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3700+		$ 1885	CNBC71
3400+		$ 1775	CNBC72
3200+		$ 1735	CNBC73
3000+		$ 1695	CNBC74
2800+		$ 1669	CNBC75

$1,669

GAMER XPLORER-64 9000

SIS Athlon 64 Chipset Motherboard
1024MB PC3200 DDR400 Memory
60 GB Ultra ATA100 Hard Drive
Mobile ATI Radeon 9700 PRO 128MB Video
15.4" WXGA Wide-Screen TFT Display 1280x800 Pixels
24x CD-RW/DVD Combo Drive
10/100 Network Card and 56K V.92 Modem
Wireless 802.11G 54Mbps Networking
3-in-1 Built-in Media Reader
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3400+		$ 1349	CNBA72
3200+		$ 1315	CNBA73
3000+		$ 1269	CNBA74
2800+		$ 1245	CNBA75

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GAMER XPLORER-64 8000

SIS Athlon 64 Chipset Motherboard
512 PC3200 DDR400 Memory
40 GB Ultra ATA100 Hard Drive
Mobile ATI Radeon 9700 PRO 128MB Video
15.4" WXGA Wide-Screen TFT Display 1280x800 Pixelss
24x CD-RW/DVD Combo Drive
10/100 Network Card & 56K V.92 Modem
Wireless 802.11G 54Mbps Networking
3-in-1 Built-in Media Reader
1 Firewire IEEE 1394 & 3 USB 2.0 Ports
1 PCMCIA Type II Slot
Microsoft® Windows® XP Home Edition w/ SP2
Weight only 6.39 Lbs
Free Carrying Case
5 Custom Colors to Choose From

AMD Mobile Athlon™ 64

3700+		$ 1365	CNBB71
3400+		$ 1249	CNBB72
3200+		$ 1215	CNBB73
3000+		$ 1175	CNBB74
2800+		$ 1145	CNBB75

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CyberPOWER Inc.

CyberPower PCs use genuine Microsoft® Windows® • www.microsoft.com/piracy/howtotell

[13]

Rio Carbon
This sleek audio player fits comfortably in your hand or pocket. We like its simple interface, clear sound, and stellar battery life.

DIGITAL AUDIO

Got a killer collection of tunes? Enjoy them anywhere and everywhere with our top music picks.

[93]

Sonos Digital Music System
This streaming-media box offers the slickest, simplest way to aggregate your digital music and play it back virtually anywhere.

[97]

Logitech Z-5500 Digital
Booming bass, detailed surround sound, and a superb digital control center make the Z-5500 an outstanding set of speakers.

[78] Apple IPod Photo

LARGE-CAPACITY MP3 PLAYER ($349 for 30GB, $449 for 60GB) A color screen, photo capability, and a TV-out option make this device the first truly useful digital audio and photo portable.

[79] Dell 3300MP

PROJECTOR ($1599) It includes every connection you can imagine and produces great images, too.

[80] FileMaker Pro 7

DATABASE ($299) This version adds a relational capability that makes the app even more useful.

[81] Sunbelt Software CounterSpy

ANTI-SPYWARE SOFTWARE ($20) Adept at rooting out troublesome apps, it uses real-time monitoring to help prevent further spyware infestations.

[82] Six Apart TypePad

BLOGGING TOOL ($5 a month, $50 a year) Though tools such as Blogger are free, bountiful features (including options for making blogs public or private), slick templates, and customization options make TypePad a smart investment.

[83] Acronis True Image 8

BACKUP SOFTWARE ($50) Sometimes, the easiest means of recovering from a hard-drive disaster may be to restore your system from an image—and True Image makes doing so a snap.

[84] Asus A8N-SLI Deluxe

MOTHERBOARD ($185) It comes with practically every port you could need, and uses speech synthesis to tell you what's wrong if the PC can't boot.

[85] Brother HL-5140

MONOCHROME LASER PRINTER ($200) With razor-sharp text and excellent print speeds, the HL-5140 beats the competition hands down.

[86] Apple ITunes Music Store

MUSIC DOWNLOADS ($1 a song) One-click simplicity, a huge selection, exclusive tracks, and playlists from many artists give it universal appeal. But we'd like to see a higher bit rate for downloads, as well as a subscription service.

[87] Internet Archive (Archive.org)

WEB SITE (Free) Who says you can't fit the entire Web under one domain? Well, maybe not the whole Web, but enough of it to keep any browser busy for a couple of lifetimes.

[88] Opera 8

WEB BROWSER (Free) Find Firefox too austere? Opera is an attractive, feature-rich alternative.

[89] Copernic Desktop Search

DESKTOP SEARCH SOFTWARE (Free) Although this utility isn't quite as efficient as Google Desktop Search, search geeks may prefer it. Copernic can hunt for files by size or by date and can store its index file in the location of your choice. ▶

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December 13, 2004
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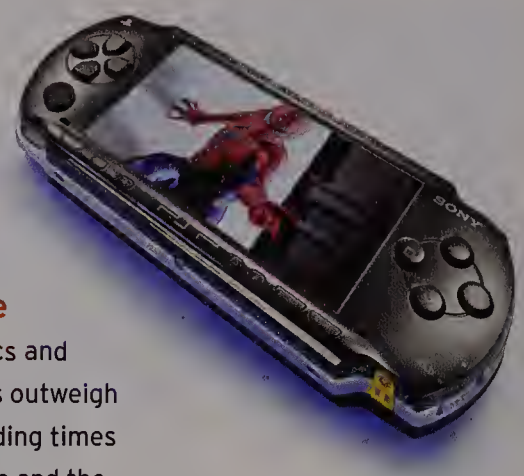
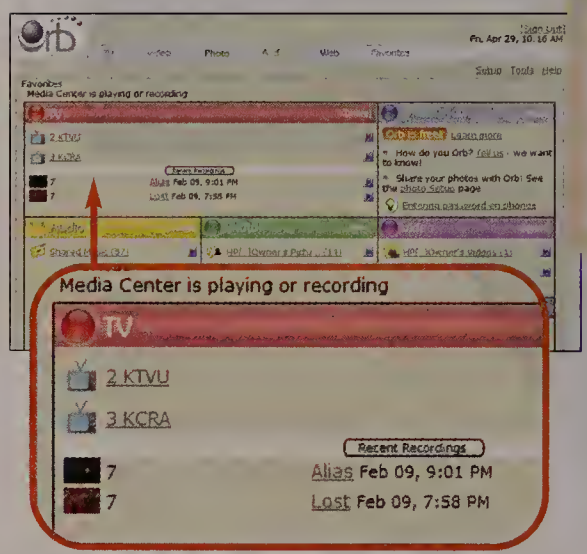
[19]



Sony PlayStation Portable

A beautiful screen, great graphics and sound, and a full lineup of games outweigh the drawbacks, such as slow loading times from Sony's Universal Media Disc and the high cost of Memory Stick Duo cards.

[50]



Orb

Want to access some video or music files on your desktop PC? This innovative service will stream them to your mobile devices, including cell phones, PDAs, and laptops.

VIDEO AND GAMING

If you're not getting enough fun in your life, the latest tech gadgets and services will do the trick.

[77]

Mitsubishi LT-3050

This high-definition LCD TV stands out for its rich, lifelike colors and superior sound system—not to mention its built-in digital TV tuner for snagging over-the-air HDTV broadcasts.

[90] Motorola Razr V3

CELL PHONE ($400 stand-alone, $200 with Cingular Wireless service plan) With support for international roaming, this slick GSM/GPRS phone works in many overseas destinations.

[91] Delphi MyFi

SATELLITE RADIO ($300) This device puts all the riches of XM satellite radio—from bluegrass to Major League Baseball—in the palm of your hand. VCR-like recording lets you save up to 5 hours' worth of audio for later listening.

[92] PDAapps VeriChat Standard Edition

MOBILE INSTANT MESSAGING ($25 first year, $20 thereafter) It's a slick, functional universal IM client that runs on handhelds—PalmOne, Windows Mobile, BlackBerry, and Symbian.

[93] Sonos Digital Music System

STREAMING MEDIA DEVICE ($1199 for two players and one controller) If money were no object, there would be no question about buying this set.

[94] EMC Dantz Retrospect Professional 7

BACKUP SOFTWARE ($129) Cheaper backup options abound, but Retrospect gets our vote for its handy tools and inclusion of a network client.

[95] Garmin StreetPilot C330

GPS NAVIGATION DEVICE ($964) With great 3D maps, clear visual and audio driving instructions, and easy operation, this is a welcome—but expensive—addition to any car dashboard.

[96] Klipsch ProMedia Ultra 2.0

PORTABLE SPEAKERS ($100) The crisp-sounding speakers don't take batteries, but like 17-inch laptops they're just barely portable—and almost as good as what you'd find on a desktop.

[97] Logitech Z-5500 Digital

PC SPEAKER SYSTEM ($299) Superb sound and a digital control center with equalization and surround processing make the Z-5500 stand out.

[98] Antec P160

DESKTOP CASE ($169) It has top-notch fit and finish, noise-abating features like a 120mm chassis fan, and a cool swiveling front control panel.

[99] Corel Painter IX

PAINT PROGRAM ($399) From watercolors to pastels, the tools in this natural-media paint program seem so real that you can practically smell the turpentine. Its new features and speed tweaks prove you can teach an old app useful new tricks.

[100] Citrix Online GoToMyPC Personal

REMOTE ACCESS ($20 a month) You can find cheaper ways to control a PC across the Web, but nobody has beaten this browser-based service's speed, reliability, and straightforward design. ■

PRODUCT DETAILS AT FIND.PCWORLD.COM/48080.

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Acer®, like Ferrari, is the technology driver of tomorrow. Both produce desirable, eye-catching and devastatingly fast products that embody the passion, spirit and experience of years leading the competition. The magnificent carbon fibre casing of the Ferrari 4000 conceals the very latest 64Bit technology, full wireless connectivity and widescreen monitor. Powerful, dark and purposeful, the Ferrari 4000 has the presence of a true champion.

NEW Ferrari 4000 NOTEBOOK TECHNOLOGY DRIVER

Ferrari
OFFICIAL LICENSED PRODUCT

AMD Turion™ 64 MOBILE TECHNOLOGY

- AMD Turion™ 64 Mobile Technology ML-37
  - AMD PowerNow!™ Technology
  - HyperTransport™ Technology
  - Enhanced Virus Protection Technology[1]
- Microsoft® Windows® XP Professional
- 1GB DDR333 SDRAM
- 100GB[2] hard drive, 5400RPM
- Integrated DVD-Super Multi double-layer drive
- 5-in-1 card reader for optional MultiMediaCard™, Secure Digital card, Memory Stick®, Memory Stick PRO™ or xD-Picture Card™
- 15.4" WSXGA+ (1680 x 1050) TFT display
- ATI® MOBILITY™ RADEON® X700 graphics, 128MB DDR
- 802.11b/g WLAN, Bluetooth®, gigabit LAN, V.92 modem
- One-year limited warranty[3]

Ferrari 4005WLMi

$2,199

(LX.FR406.035)

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- 178° horizontal viewing angle
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- 2 x 5.0W integrated speakers
- VGA, DVI-D signal connectors
- 300 cd/m² brightness
- 16ms response time
- Gloss-black color

600:1 CONTRAST RATIO

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20.0" LCD

Acer AL1932d

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- 1280 x 1024 native resolution
- 500:1 contrast ratio
- 140° horizontal viewing angle
- 140° vertical viewing angle
- 2 x 2.0W integrated speakers
- VGA, DVI-D signal connectors
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Acer AL1932d
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- 60GB[2] hard drive
- Integrated CD-RW/DVD-ROM combo drive
- 15.4" WXGA (1280 x 800) TFT display
- SiSM760GX chipset with integrated Mirage™2 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem
- One-year limited warranty[3]

Acer Aspire 3002WLCi

$799

Mobile AMD Sempron™ Processor 2800+
Microsoft® Windows® XP Professional
(LX.A5506.005)

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19.0" LCD

Acer AL1914s-8

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- 1280 x 1024 native resolution
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- 140° horizontal viewing angle
- 140° vertical viewing angle
- 2 x 1.0W integrated speakers
- VGA, DVI-D signal connectors
- 250 cd/m² brightness
- 8ms response time
- Silver color

8MS, DVI, SPEAKERS

Acer AL1912
$289
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Acer AL1912

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- 1280 x 1024 native resolution
- 500:1 contrast ratio
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$10 PRICE CUT!

Acer AL1715s-8
$249
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Acer AL1715s-8

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- 1280 x 1024 native resolution
- 500:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- 2 x 1.0W integrated speakers
- VGA, DVI-D signal connectors
- 300 cd/m² brightness
- 8ms response time
- Silver color

8MS, DVI, SPEAKERS

Acer AL1714cb-8
$229
17.0" LCD

Acer AL1714cb-8

- 17.0" TFT LCD
- 1280 x 1024 native resolution
- 350:1 contrast ratio
- 160° horizontal viewing angle
- 120° vertical viewing angle
- VGA signal connector
- 370 cd/m² brightness
- 8ms response time
- Black color

8MS RESPONSE TIME

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Acer AL1715

- 17.0" TFT LCD
- 1280 x 1024 native resolution
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- 150° horizontal viewing angle
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- Black color

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Acer AL1511
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15.0" LCD

Acer AL1511

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AMD Turion™ 64 Mobile Technology

Uniquely Optimized for Mobility

AMD Turion™ 64 Mobile Technology is a new family of simultaneous 32- and 64-bit notebook processors that Acer® currently offers in the **Ferrari 4000** and **Aspire 5000**. At the core of these processors is AMD64 architecture, which provides leading-edge 32-bit performance and investment protection thanks to seamless 32- to 64-bit migration.

If you run a business, AMD64 technology lets you adopt new 64-bit applications at your own pace while you get the best from your critical 32-bit software. At home the AMD64 processor core delivers superior multimedia capabilities for both 32- and 64-bit applications, enabling cinema-quality digital entertainment, life-like games and powerful creativity and productivity tools.

AMD Turion™ 64 Mobile Technology, with full wireless compatibility, incorporates three features that will benefit you whether you travel with your notebook around the house or across continents:

- **AMD PowerNow!™ Technology** delivers extended battery life for more work or entertainment away from a power source.
- **HyperTransport™ Technology** increases application responsiveness and decreases loading time.
- **Enhanced Virus Protection Technology**[1] helps to protect your system and, thus, prevent downtime.

AMD
Turion™ 64
MOBILE TECHNOLOGY

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- 2000:1 contrast ratio
- 16.7 million displayable colors
- PC and Mac compatible

PD525

Acer PD116P

$849

(EY.J1401.W04)

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- SVGA (800 x 600) native resolution
- 2000:1 contrast ratio
- 16.7 million displayable colors
- PC and Mac compatible

PD116P

Acer Notebook Service Upgrades Protect Your Valuable Investment

Quality is built into every notebook Acer makes, and each comes with a one-year standard limited warranty.[3] It includes 24/7 (excluding some holidays) hardware technical support via toll-free phone plus a concurrent International Traveler's Warranty for travel outside the U.S. and Canada. Extra protection is available with one of these upgrades:

It's a tough world out there, and accidents do happen—sticky spills, dangerous drops, nasty knocks—which is why you should consider the Total Protection Upgrade. It runs concurrently with the limited warranty[3] and limited warranty extension and covers the cost of a replacement unit if your covered notebook cannot be repaired.

2-Year Extension of Limited Warranty (146.AB820.EX2)

$99

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Excludes extension of International Traveler's Warranty.

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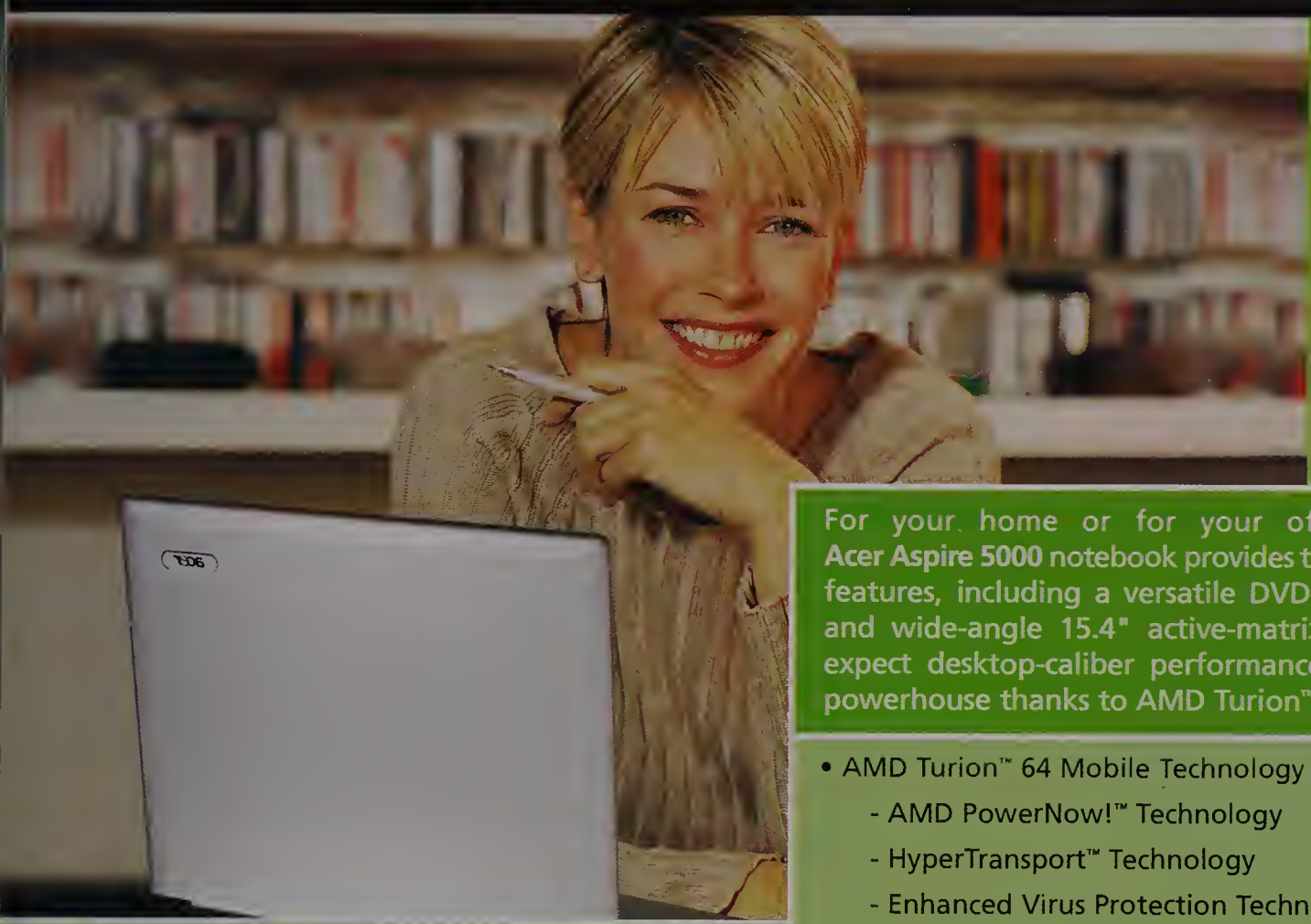
cer recommends Microsoft® Windows® XP Professional.



AMD Turion™ 64 MOBILE TECHNOLOGY

For your home or for your office the full-featured **Acer Aspire 5000** notebook provides the must-have computing features, including a versatile DVD-Dual drive (DVD+/-RW) and wide-angle 15.4" active-matrix display. You can also expect desktop-caliber performance from this multimedia powerhouse thanks to AMD Turion™ 64 Mobile Technology.

- AMD Turion™ 64 Mobile Technology
  - AMD PowerNow!™ Technology
  - HyperTransport™ Technology
  - Enhanced Virus Protection Technology[1]
- Microsoft® Windows® XP Professional
- 512MB DDR333 SDRAM
- 80GB[2] hard drive
- Integrated DVD-Dual drive (DVD+/-RW)
- 15.4" WXGA (1280 x 800) TFT display with Acer® CrystalBrite Technology
- SiSM760GX chipset with integrated Mirage™2 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem
- One-year limited warranty[3]

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AMD Turion™ 64 Mobile Technology ML-30
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(LX.A5106.001)

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The **Acer Aspire 3000** Series is a new family of notebooks based on the latest Mobile AMD Sempron™ processors with AMD PowerNow!™ Technology and designed for home users and professionals from small businesses in search of excellent mobile performance and high entertainment value. These slim, space-saving systems come with multimedia capabilities and full industry-standard connectivity. Energize your work and leisure time with the Acer Aspire 3000.

- Mobile AMD Sempron™ Processor 2800+
  - AMD PowerNow!™ Technology
  - HyperTransport™ Technology
  - Enhanced Virus Protection Technology[1]
- Microsoft® Windows® XP Home Edition
- 256MB DDR333 SDRAM
- 40GB[2] hard drive
- Integrated CD-RW/DVD-ROM combo drive
- 15.0" XGA (1024 x 768) TFT display
- SiSM760GX chipset with integrated Mirage™2 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem
- One-year limited warranty[3]

Acer Aspire 3002LCi

$649

Mobile AMD Sempron™ Processor 2800+
Microsoft® Windows® XP Home Edition
(LX.A5505.107)

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[1] Enhanced Virus Protection (EVP) is enabled by Microsoft® Windows® XP Service Pack 2. By default, EVP will protect the user's Windows operating system only. Users must enable the protection of their applications and associated files to be protected from memory buffer overrun attacks. AMD and Microsoft strongly recommend that users use third-party anti-virus software as part of their security strategy.

[2] When referring to storage capacity, GB stands for one billion bytes and MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

[3] For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76503.

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BY PAUL JASPER

Whether you're a beginner, a sports fanatic, or a serious photographer, we'll point you to just the right digital camera and give you tips on how to get the most out of it.

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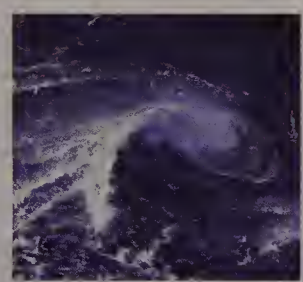
TRAVEL | PG. 109



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VANITY | PG. 110

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BACKCOUNTRY | PG. 116

BACKUP | PG. 120

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PHOTOGRAPH BY KEVIN CANDLAND

GETTY IMAGES: PAGES 109, 110, 114

The Starter Camera

THE BEST CAMERA for beginners is a point-and-shoot that is simple—but that offers some manual controls so the user doesn't quickly outgrow it. Both of these cameras provide an easy introduction to digital photography. Plus, they're reasonably priced yet include a few advanced features found on more expensive models, without overwhelming novices.

HP Photosmart R717

★★★★☆ **Price: $300**

THE 6.2-MEGAPIXEL Photosmart R717 has a 3X optical zoom and a built-in help system that supplies basic instructions and tips on how to get going faster. The camera's Image Advice feature suggests remedies on particular shots, and you can also fix flash-induced red eye—without having to edit the image on your PC.

There are plenty of advanced settings to help you get even better shots. The adaptive lighting feature brightens a photo's darker areas. Automatic exposure bracketing lets you take three pictures at successive exposure levels and then choose the best result. The camera's aperture priority mode enables you to control the depth of field.

Printing and sharing photos is easy: You tag them for later printing or e-mailing as you review them on the LCD. And when you connect the R717 to your computer or printer, the camera already knows how to handle the images. find.pcworld.com/47128

Canon PowerShot A520

★★★½☆ **Price: $300**

THE CANON PowerShot A520 is surprisingly affordable, considering its features and optional lenses. Aside from the fully automatic mode, you get 13 scene modes for shooting everything from foliage to fireworks. The manual mode allows you to adjust both shutter speed and aperture for maximum control.

The A520 has a 4X optical zoom lens—unusual for a 4-megapixel unit at this price; options include wide-angle and telephoto converters, a close-up lens, and an external flash unit. And at 8 ounces (including the battery) this model is light enough to carry everywhere. find.pcworld.com/48083

The Family Camera

IN ADDITION TO being simple enough for inexperienced shooters, a family camera should offer practical features such as a camera dock (to simplify image transfers to a PC) and software that makes setting up an online photo gallery easy.

Kodak EasyShare Z740

★★★☆☆ **Price: $380 camera only ($480 with printer dock)**

FOR FAMILIES THAT are always on the go, Kodak's EasyShare Z740 makes sharing photos through prints, e-mail, and Web sites simple and quick. For $100 extra, the camera comes with the Printer Dock Series 3, a portable dye-sublimation printer that makes 4-by-6-inch prints.

The camera has an automatic mode, or choose from 17 scene modes; the generous 10X optical zoom helps you capture your child scoring a winning goal from the far end of the field.

Using the camera's share button to tag each of your shots, you can make 4-by-6-inch prints simply by inserting the camera into the printer's docking station and pressing its print button. When you connect the printer to your PC, pressing the transfer button fires up the EasyShare software, which you use for uploading photos, sending copies by e-mail, or adding images to an online album at the EasyShare Gallery Web site (formerly Ofoto). find.pcworld.com/48082

TIP

Put Yourself in the Shot

JOINING YOUR FAMILY in a group photo is easy with a wireless shutter release. Instead of relying on the camera's self-timer, you decide when to shoot. The Canon PowerShot G6, for example, has such an option. *—Tracey Capen*

CAMERAS: ROBERT CARDIN

The Travel Camera

IF YOU DON'T WANT to stroll the Champs Elysées with a heavy single-lens-reflex camera hanging around your neck like a digital-age albatross, choose a camera that's lightweight but doesn't skimp on features. These two models offer travelers the flexibility they need to accurately capture a variety of settings. The big LCD doesn't hurt, either.

Fujifilm FinePix F10

★★★★☆ **Price: $370**

WEIGHING JUST 5.5 ounces, Fujifilm's FinePix F10 is tiny and easy to carry on the road. Despite its diminutive size, you get a 3X optical zoom and a large, 2.5-inch LCD. Regrettably, there's no optical viewfinder, which would come in handy when bright sunlight obscures the LCD.

The F10 is particularly well suited for shooting in dimly lit cathedrals and museums—venues where flash photography is often frowned upon: The 6.3-megapixel sensor has an unusually high sensitivity range (topping out at ISO 1600); I was able to capture some nice-looking shots at a concert using a high ISO and no flash. For snorkeling or diving, Fujifilm sells an optional waterproof housing ($179) that promises to protect the camera at depths as great as 130 feet.

To charge the lithium ion battery, you plug the AC power adapter into the F10's mini-USB port. This simple design makes for easy packing in your bag. The F10 is also straightforward to operate, though having only five scene modes may displease some beginners. Images looked sharp and attractive in our lab tests, scoring higher than the SLRs reviewed here. find.pcworld.com/48085

Canon PowerShot G6

★★★★½ **Price: $600**

SERIOUS PHOTOGRAPHERS relish travel for its opportunities to create works of art. Though the Canon PowerShot G6's silver body doesn't look like hard-core camera gear, it has all the features you need for photo artistry. Thanks partly to the unit's 7.1-megapixel sensor, shots will have enough detail for framing and enlarging. The 4X optical zoom gives you the flexibility to switch to wide-angle mode for big monuments and scenery, and to telephoto mode for more intimate shots of people and architectural highlights. Autoexposure bracketing helps you make the most of the available lighting. The G6 is best suited to photographers who are familiar with single-lens reflex cameras: Its shooting modes mimic those of an SLR, and the only scene modes you get are for portraits, landscapes, and night shots.

Like many advanced cameras, the G6 offers a good range of accessories, though that can translate into more equipment to haul on your travels. The hot shoe can accept a flash gun when you need a more powerful light source than the built-in flash. Among recently tested cameras, the G6 earned one of the highest scores for its photos taken with a built-in flash.

An optional lens adapter tube (about $45) lets you fit converters that can capture a much wider angle ($150), increase the telephoto range to 6X ($100), or reduce the focusing distance for close-ups of small flowers or insects ($90). The camera comes with a wireless remote, so you can put yourself in pictures of exotic locales. find.pcworld.com/44872 ▶

TIP

Snap Smart on the Go

While traveling, you want to be ready for any photo-taking opportunity that crops up. When you're far from home—or from a convenience store for that matter—a little preparedness can go a long way.

MP3 Player Storage: If you own an IPod and haven't stuffed it full of music files, you can use that empty space to store photos. For example, Belkin (www.belkin.com) makes two devices that transfer files to an IPod: Its Digital Camera Link ($80) moves images from a digital camera via a USB cable, while its Media Reader ($100) transfers files from a media card. Apple offers a similar accessory—the $29 IPod Camera Connector—but it works only with the IPod Photo.

Power: Always carry a second set of rechargeable batteries. If your travels involve lots of driving, you can use that time to recharge your camera's batteries; some camera makers offer car adapters for doing so. Alternatively, you can use a DC-to-AC power inverter to power your battery charger and other devices; one such device is the Xantrex XPower Micro Inverter 175 (find.pcworld.com/39575). If you're visiting a country that doesn't use 120-volt power, you'll need either a universal power adapter or a battery charger that includes one, like the Maha PowerEx MH-C204W (www.thomas-distributing.com), which charges AA NiMH batteries.

—Eric Butterfield

The All-Weather Camera

WATER AND DIGITAL CAMERAS' electronics generally don't mix well. If you are likely to be taking pictures while singing in the rain, you'll want to have a camera whose body is well prepared to resist the elements.

Olympus Stylus 500

★★★☆☆ **Price:** $350

IF YOU LIVE IN the rainy Northwest or frequently travel to wet climes, a water-resistant camera can free you to shoot at will without worrying about damaging your camera. The Stylus 500 from Olympus offers protection from soggy conditions, though it's not intended for use underwater. This 5-megapixel, general-purpose shooter with 3X optical zoom has a sturdy metal body; rubber seals insulate the battery and media compartments; and a circular barrier that slides into place to seal the lens when you're finished shooting. The camera's water-resistant microphone and speaker let you record and play back voice notes to accompany your photos. And you can set the white balance for cloudy conditions, though we'd have appreciated getting more scene modes that adjust for inclement weather.

For shutterbugs who plan to get really wet, Olympus sells a $145 underwater housing that promises further protection while sailing or during dives down to 131 feet. Among the camera's 20 scene modes are two for use with the housing: one for wide-angle shots of underwater landscapes, and another for close-ups of fish and plant life. find.pcworld.com/47088

The Vanity Camera

OH, YOU'RE SO VAIN. If looking good with your camera is more important than getting the best possible picture quality, choose a model whose sleek design makes a fashion statement. These thin units are very lightweight and comfortable to carry in a pocket.

Casio Exilim EX-Z57

★★★☆☆ **Price:** $380

THE THINNEST OF DIGITAL cameras can be just as fashionable as a fancy mobile phone or an IPod. Take the ultraslim Casio Exilim EX-Z57, which shoots at 5 megapixels. Weighing just 5.2 ounces, it's light enough to carry comfortably in a shirt pocket. And its stylish alloy body is sure to turn heads, especially when the 3X zoom lens pops out of its extremely thin chassis.

The big, 2.7-inch LCD fills the back of the camera, scarcely leaving room for the controls. You use the LCD both to frame your shots (there's no optical viewfinder) and to show off your snaps to others.

Even at rest, the EX-Z57 looks sexy. It can play a slide show while sitting in the included cradle and charging its batteries. Touching a button on the cradle transfers new photos to your PC, and you can even set it to generate album pages from the camera to your Web site. The EX-Z57 has 23 scene modes for subjects from food to fireworks.

As is typical for such a small camera, though, image quality was mediocre on most of the shots in our tests. Its outdoor images, however, earned higher marks than the output of most other cameras here. There are six settings for white balance under various lighting conditions. find.pcworld.com/48086 ▶

TIP

Share Your Photos Online

IF YOU TAKE pictures mainly to show them to friends and family, an online photo-sharing site is a good resource.

Kodak, HP, and other camera manufacturers provide software for uploading photos to online albums. Both Kodak's EasyShare and HP's Instant Share software make it easy to post images and then e-mail a link to friends, but Kodak's service added a couple hurdles for recipients: To print photos I received via Kodak EasyShare, I first had to create a sign-in and download Kodak Print@Home software. Unfortunately, the software would not work with my regular browser, Mozilla Firefox; I had to use Internet Explorer.

Other online services, including Snapfish and Flickr, allow you to share photos—often free of charge. Some services also provide a chat feature, a blogging tool, or camera-phone support. For a more detailed comparison of options, see our May *Next Gear* article, "Better Photo Sharing" (find.pcworld.com/47982). *—E.B.*

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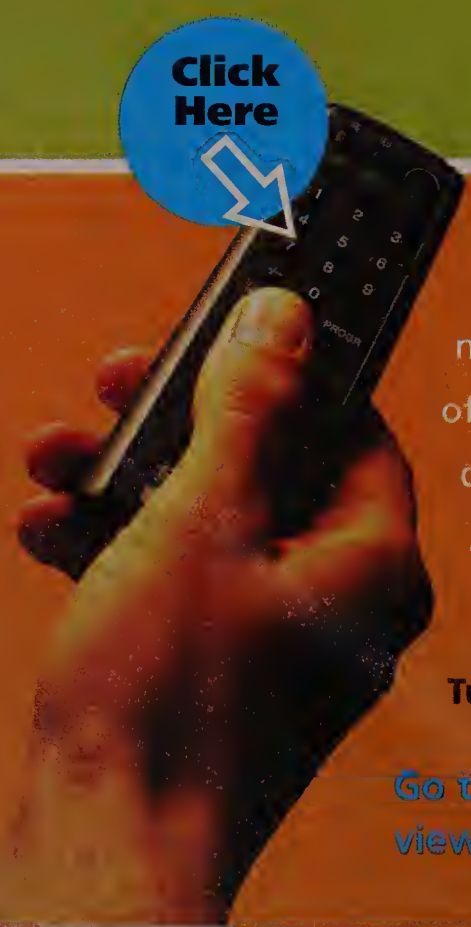

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The Sports Camera

FAST-MOVING SUBJECTS can be difficult to capture. You need a camera that reacts speedily to freeze the action and has a strong enough zoom to get close to athletes moving quickly in the distance.

Olympus C-5500 SportZoom

★★★½☆ **Price: $320**

THE MODERATELY priced, 8.6-ounce, 5.1-megapixel Olympus C-5500 SportZoom fits the bill for capturing fast movement, with a 5X zoom lens that will take you close to the action from the sidelines.

Although the C-5500 has a sports mode that uses a fast shutter speed to stop movement, you can also use its shutter-priority mode to set shutter speed as fast as 1/1500 second; however, you may need to increase the camera's sensitivity (up to ISO 400) to compensate.

Freezing the action entirely isn't always desirable. Slower shutter speeds can give the impression of movement: Panning with a subject like a race car will blur the background and the rotating wheels, but a point-and-shoot camera is unlikely to have the fast, accurate focusing and quick shutter response needed to make it work. In our informal testing, the C-5500's focusing was usually swift enough to get good results, though it sometimes failed to lock on immediately. Use continuous burst mode to snap multiple frames, to help ensure that you get a good shot.

In continuous-focus mode, the camera focuses on a moving subject even when it's not in the center of the frame. find.pcworld.com/47708

Canon EOS Digital Rebel XT

★★★★½ **Price: $1000**

PHOTOGRAPHERS WITH a bigger budget will get higher-quality images and superior control from a digital SLR, such as the 8-megapixel Canon EOS Digital Rebel XT. The camera body alone costs $900, or you can buy a $1000 kit that includes a 28mm-to-88mm zoom lens. Either way, you'll need a longer zoom lens (such as Canon's lightweight, 55mm-to-200mm zoom, priced at $270) to fill the frame with action in the distance.

As with point-and-shoots, shutter speed is a top priority when photographing sports. The Rebel XT delivers even better results than the Olympus C-5500 SportZoom because you can really freeze action at its fastest shutter speed of 1/4000 second. Most of the cameras here that are equipped with a fixed lens (meaning you can't swap lenses) cannot capture more than 2 frames per second in a burst, and they stop at 5 frames. In contrast, the Rebel XT is rated to take up to 14 shots at 3 fps, though we took 20 shots at that speed using high-speed CompactFlash media. Athletes and racehorses stay sharp even when they're running toward you, thanks to the camera's predictive focusing. In addition, you can crank the Rebel XT's sensitivity up to as high as ISO 1600 for shooting indoor games and nighttime contests. find.pcworld.com/48088 ▶

TIP

Set the Scene Mode

SCENE MODES can be your best bet for capturing a pleasing shot with a simple point-and-shoot camera—or if you haven't yet mastered your fancier camera's manual controls. The array of scene modes varies from camera to camera, but most models have a similar base set.

Portrait mode: Uses a wider aperture and spot-focus to make the person look sharply focused against a blurred background; a fill flash prevents harsh shadows on your subject's face. A few cameras also adjust color balance for more accurate skin tones.

Landscape mode: Sets the focus to infinity and uses the minimum aperture for maximum depth of field.

Macro/close-up mode: Often depicted with a flower icon; lets you place the lens close to a small subject.

Sports mode: A fast shutter speed freezes movement; continuous shooting mode is usually specified.

Kids and pets mode: Uses a fast shutter because small creatures may not follow your directives to stay still.

Nighttime: Uses a slow shutter to better capture dim evening light; hold the camera very still.

Fireworks: Focus is set to infinity, and the shutter to a slow speed; using a tripod is recommended.

Other modes: Some cameras have foliage, snow, and underwater modes. The Casio EX-Z57 has one for sunsets; it emphasizes red hues. *—E.B.*

CAMERAS: ROBERT CARDIN

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The Backcountry Camera

HIKING TRAILS are a gold mine for photographers, but finding a camera that can handle both the rough environment and the demanding shooting conditions is a challenge. You don't want to load down your pack with a heavy single-lens-reflex unit, yet you want all the power an SLR delivers. These three advanced models have a wide enough lens to capture big-sky vistas and an optional teleconverter for homing in on wildlife. And because a crowded backpack can be rough on any camera, we picked sturdy models.

Canon PowerShot S70

★★★★☆ **Price: $500**

THE CANON PowerShot S70 has a compact design and weighs just 8.1 ounces. It also has a sliding front cover that protects the entire lens assembly—not just the glass—when the camera is not in use. Its automatic settings, including auto-exposure bracketing, make the S70 very responsive. But more-advanced photographers will appreciate its many manual features, such as shutter speed and aperture priority modes. The 7.1-megapixel CCD records plenty of detail.

You need a wide-angle lens to capture the full breadth of stunning views, and the S70's zoom lens reaches the equivalent of 28mm on a 35mm film camera. To capture wildlife without frightening them off, look for a camera with a long zoom. The S70 has a 3.6X optical zoom (up to 100mm); an optional $100 teleconverter will extend your range up to 200mm. For closeups, the S70's macro mode lets you focus on small plants and insects as close as 1.6 inches away. The optional waterproof housing ($240) is rated to protect the camera to a depth of 130 feet.

TIP

Swiveling LCD: Unique Angles

A FEW CAMERA VENDORS, including Olympus and Canon, put a swiveling LCD on some higher-end models. My Olympus C-5060, for example, has an LCD that rotates up and spins 180 degrees as does the LCD on the Olympus C-7070 Wide Zoom. I love this feature: At parties I face the LCD downward, and then hold the camera over my head to get a bird's-eye shot. This feature is equally useful for wildflower photography. Facing the LCD upward, I don't have lie on my belly to get great shots of tiny alpine flowers. *–T.C.*

In outdoor tests, the S70 produced very sharp photos with accurate colors. The only point-and-shoot to earn a better overall score for image quality was the Fujifilm F10. find.pcworld.com/48090

Olympus C-7070 Wide Zoom

★★★★☆ **Price: $500**

ANOTHER 7.1-MEGAPIXEL model, the 13.5-ounce Olympus C-7070 Wide Zoom has a sturdy magnesium alloy body that's much bulkier than the Canon's. The 1.8-inch LCD flips up and rotates, helping you shoot from interesting angles, and then stows away neatly to protect against scratches. The C-7070's 4X optical zoom extends from 27mm to 110mm, so it can handle both broad vistas and far-away details in the great outdoors. In addition, the camera's f/2.8-to-f/11 aperture range is impressive compared with the more typical range of f/2.8 to f/8.0. You can add a telephoto converter to boost the optical zoom up to 12X for wildlife shots, but that extra costs $320 (including the required adapter tube).

You shouldn't have to carry spare batteries except on long camping trips: The C-7070's lithium ion battery exceeded 500 shots on one charge in our test. Using the optional battery holder might double that number. find.pcworld.com/48091 ▶

CAMERAS: ROBERT CARDIN

SNAPSHOT

Nikon Coolpix 8400 ★★★★☆

THE $900 NIKON Coolpix 8400's 3.5X lens starts at 24mm—the widest angle achieved by any camera in its class. This 8-megapixel unit's tough black magnesium alloy body weighs 14.1 ounces, making it just a shade heavier than the Olympus C-7070 Wide Zoom—and potentially a bit of a burden on long-distance hikes. Its 1.8-inch LCD swivels, and the electronic viewfinder lets you see through the lens. find.pcworld.com/48126

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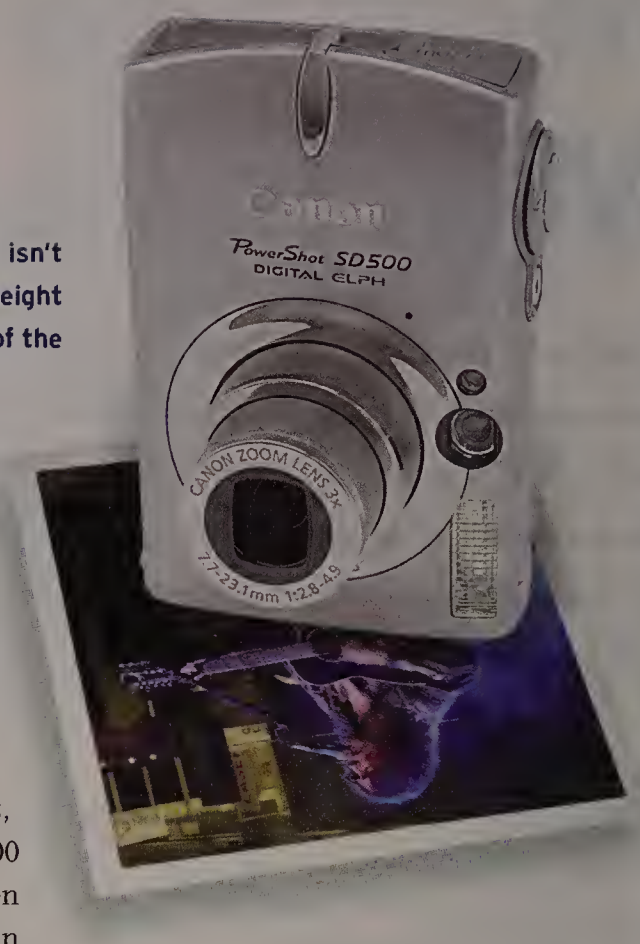
The Backup Camera

PLAYING SECOND FIDDLE TO A single-lens-reflex or advanced camera (see page 122) isn't easy. A good backup camera needs to deliver many of the big dog's features in a lightweight chassis. Both of the models discussed here achieve this, and they also captured some of the sharpest images we've seen from recently tested point-and-shoot cameras.



Canon PowerShot SD500

★★★★☆ **Price:** $500

A BULKY FIXED-LENS model or SLR isn't practical to carry everywhere. A compact alternative is Canon's PowerShot SD500—it impressed us with the excellent quality of the photos it captured in our tests.

The SD500's tough metal body weighs just 6 ounces and fits comfortably into a shirt pocket or purse. It powers up quickly, and there's no noticeable lag when you push the shutter release. The 3X optical zoom and 2-inch LCD help you frame your shots easily. And you can switch to an optical viewfinder when you're following a moving target, for example.

The camera's nine autofocus points lock onto subjects swiftly. In our tests, the 7.1-megapixel sensor let the SD500 capture plenty of detail, but shots taken with the built-in flash scored lower than the pictures taken by most of the other models mentioned here.

The PowerShot SD500 has a fully automatic mode and nine scene modes—including settings for portraits, night scenes, and indoor shots, as well as for underwater and fireworks. The manual mode permits you to set white balance, ISO sensitivity, and exposure compensation. But while the camera's aperture range of f/2.8 to f/13 is the widest we've seen on such a small camera, you can't set the aperture or shutter speed manually. find.pcworld.com/48092

TIP

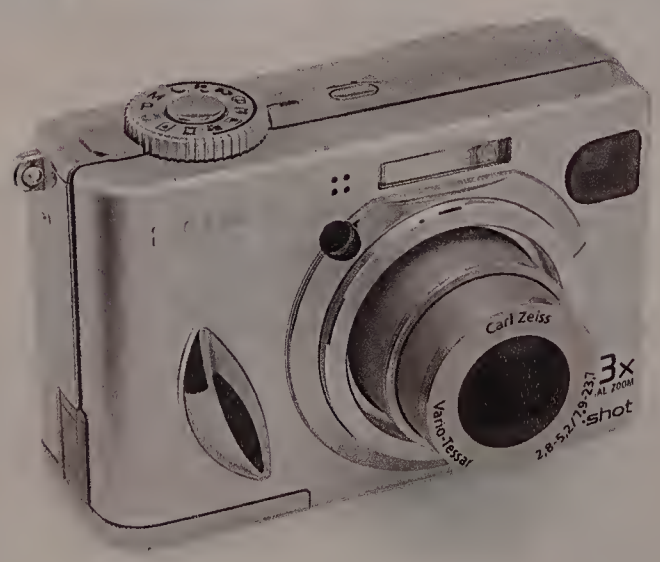
Get High-Quality Video

IN ADDITION TO taking photographs, most digital cameras can record video. They won't match the quality of a camcorder; but if you plan to record a lot of video clips, you should look for a model capable of recording at a high resolution and high frame rate. For example, the Nikon Coolpix 8400 can record at 640 by 480 pixels (many models max out at just 320 by 240) at 30 frames per second. Video recorded at a lower frame rate may not look as good when played back: For example, when recording video at 640 by 480, the Kodak Z740 captures 13 frames per second. Also, some cameras don't record audio while capturing video at higher resolutions, and few models will zoom while recording video. *—E.B.*

Sony Cyber-shot DSC-W7

★★★★☆ **Price:** $450

AT 6.9 OUNCES, the Sony Cyber-shot DSC-W7 makes a good pinch hitter. Its 7.2-megapixel sensor records onto a Sony Memory Stick; but if you don't have one handy, you can save shots to the camera's 32MB of built-in memory. The DSC-W7's generous 2.5-inch display is more than large enough for composing your shots (and showing them off once you've taken them), and there's still enough room on the back for an optical viewfinder. The camera's 3X optical zoom takes you close to the action, and its seven scene modes help you snap subjects under different lighting conditions—twilight portraits, candlelit dinners, and beach trips, for example. Unlike the Canon SD500's manual mode, the DSC-W7's permits you to set the unit's shutter speed and aperture.



The DSC-W7 comes with a charger for its two AA nickel metal hydride batteries, but you can drop in a pair of disposable cells in an emergency. The camera also has a broad range of accessories, including several screw-on conversion lenses. The $130 Super Telephoto lens, for example, offers 2.6X magnification; the 1.7X telephoto lens costs $100.

In our lab tests, the DSC-W7 performed well all around, and its built-in flash easily outperformed the PowerShot SD500's. Our only disappointment was that, when we transferred our informal test shots to a PC, we had to rotate our portrait shots manually because the DSC-W7 lacks the orientation sensor we're accustomed to in Canon, HP, and Kodak cameras; those cameras tag images with data that the accompanying software then reads, enabling it to rotate the images appropriately when you upload them to your PC. Third-party software such as Adobe Photoshop can read this data, too, and will rotate the images accordingly. find.pcworld.com/48093 ▶

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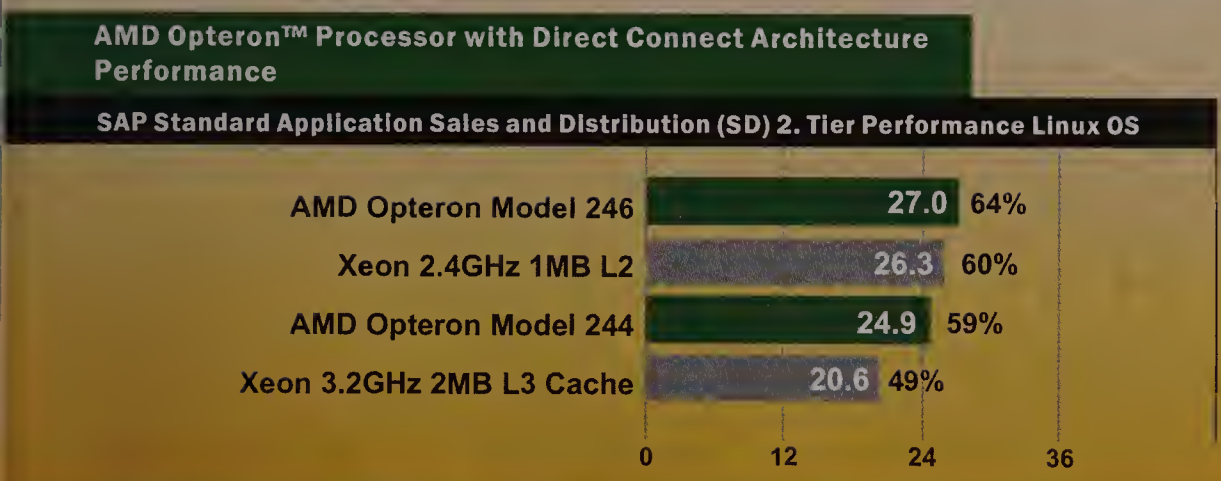

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The Advanced Camera

FOR PEOPLE WHO TAKE THEIR PHOTOGRAPHY seriously, a single-lens-reflex model is truly the tool of choice. SLRs can accommodate a variety of fast lenses for shooting portraits, sports, and so on. A large optical viewfinder helps when focusing manually, and the manual controls exceed those offered by cameras that have a built-in lens. Also, SLRs usually have a wider range of shutter speeds and aperture settings than do non-SLRs. The only drawbacks are their larger sizes and higher prices.

Nikon D70

★★★★☆ **Price:** $1100 (with lens)

THE 6.1-MEGAPIXEL Nikon D70 is solidly constructed and comes with a 3.9X zoom lens (equivalent to 27mm to 105mm on a 35mm film camera) that's good for portraits and wide-angle landscape photography. If you already have a film-based Nikon with a set of lenses, you can pick up the D70 body alone for less than $1000 and reuse the lenses you have.

You get seven fully automatic scene modes, such as for portraits and night scenes. But the point of getting an SLR is to exercise manual control—over shutter speed, aperture, white balance, sharpening, contrast, and color settings—and that's what the D70 lets you do. The D70's automatic bracketing permits you to take three shots in succession, with varying exposure or white balance settings, and then select the best one. Many of these adjustments have dedicated controls, and using them is more convenient than diving into the menus on an LCD, as cameras with a fixed lens often require.

You can typically push the light sensitivity and exposure time on a digital SLR higher than a fixed-lens model allows, so you can shoot night-time cityscapes or indoor portraits with nothing more than the ambient light. The D70's ISO range goes as high as 1600. The camera has a built-in flash that's useful for capturing casual portraits or for filling in dark shadows on a subject's face in bright sunlight; it also has a hot shoe for when you need to attach a more powerful light source.

The D70's rechargeable battery was still going strong when we stopped testing it after 500 shots. Such stamina could come in handy: In continuous mode, the D70 can shoot more than 100 frames at 3 fps.
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Canon EOS 20D

★★★★½ **Price:** $1450 (with lens)

THE 8.2-MEGAPIXEL Canon EOS 20D offers professional-level features and speed. For example, in the camera's continuous mode, you can shoot up to 5 frames per second for a maximum of 23 shots. The 20D focuses quickly, and its nine autofocus points glow red in the viewfinder when you've locked onto a subject. The predictive focus is fast enough to track a race car as it rushes toward you. The 20D also can take advantage of the fastest CompactFlash cards, which is especially important when you record images simultaneously in both JPEG and RAW formats. In contrast, the Nikon D70 doesn't let you record files in both formats at the same time. Recording RAW files saves the full 12 bits of data per pixel, versus 8 bits per pixel for JPEG files, giving you more data to work with later in image-editing software. But because cameras don't apply their built-in processing—such as sharpening or white balance correction—to RAW files, editing RAW images on a PC can mean more work than tweaking a JPEG image. Typically a JPEG image will suffice for your needs, but it's helpful to have the RAW file when the image requires a lot of editing.

The 20D also has a sensitivity range of ISO 100 to 3200—that's broader than the range of most fixed-lens cameras and far exceeds the Nikon D70's range of ISO 200 to 1600. The extra sensitivity to light at ISO 3200 could come in handy for stopping motion in fairly low natural light. In addition to standard shutter-priority, aperture-priority and full-manual shooting modes, you get seven automatic modes. Most notable is an auto-depth setting that automatically selects foreground subjects using nine focal points, and then chooses a small enough aperture to keep all subjects in focus. This setting worked well in shots of groups of people at various distances from the lens, situations where regular focusing invariably locked onto the background or onto just one of the subjects.
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Paul Jasper is a technology consultant and freelance writer based in San Francisco; Eric Butterfield is an associate editor and Tracey Capen is an executive editor for PC World.

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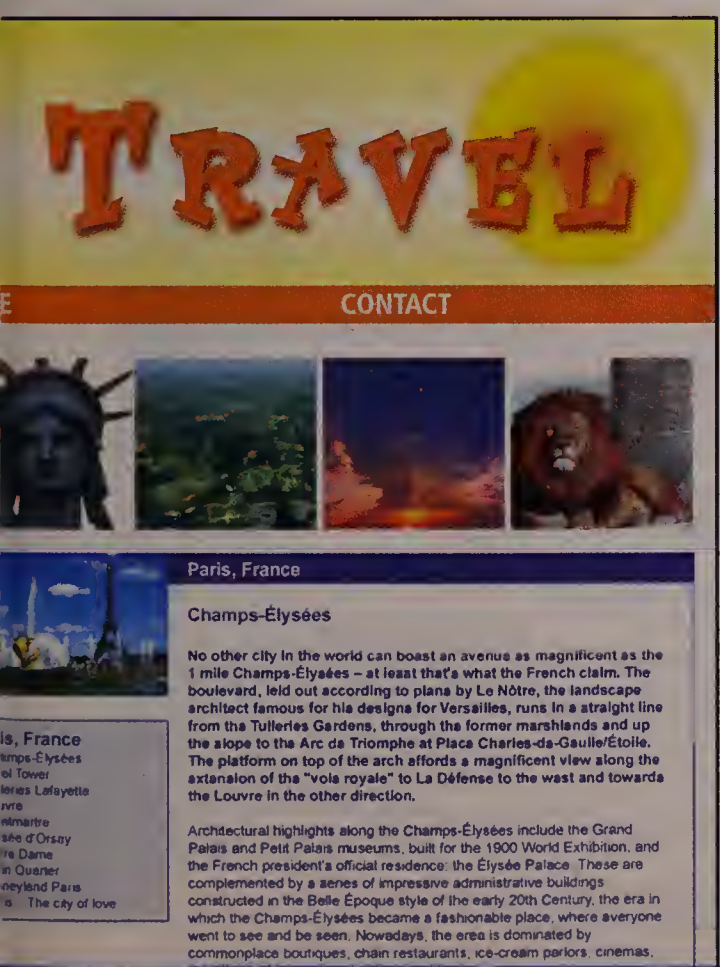

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Name	Close	Change
Composite	2016.42	+ .67
Banks	3017.16	+ 2.89
Biotech	662.51	+ 2.55
Computer	899.90	+ .05
Financial	3653.61	+ 5.74
Industrial	1716.02	- .53
Insurance	3323.04	- 7.48
Telecommunications	183.17	- .32
Transport	2220.42	+ 9.72

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Stocks Close Narrowly Mixed on Oil's Climb

Wall Street stabilized Thursday, closing little changed although another spike in oil prices sent many investors to the safety of the bond market. Scattered bargain-hunting after the previous session's slide kept selling to a minimum.

The broader indexes managed narrow gains. The Standard & Poor's 500 index was up 2.14, or 0.18 percent, at 1,190.21, and the Nasdaq composite index gained 0.67, or 0.03 percent, to 2,016.42.

The bond market pushed higher for a second session as investors moved out of stocks and into less risky investments. The yield on the 10-year Treasury note fell to 4.46 percent from 4.51 percent late Wednesday.

FBI Opens Probe Into Delphi Accounting

The FBI has begun investigating accounting errors at Delphi Corp., the world's largest supplier

Crude Futures Hold Above $55 Per Barrel

Crude oil prices held above $55 a barrel Friday, boosted by rising prices for gasoline and heating oil, as well as an investment bank report saying strong demand and tight supply could cause a "super spike" in prices

Qwest Boosts Bid for MCI to $8.94 Billion

Qwest Communications International Inc. boosted its bid for MCI Inc. again on Thursday, offering $8.94 billion just two days after the long-distance phone company accepted a sweeter $7.51 billion proposal from Verizon Communications Inc.

AP Photo – DAVID ZALUBOWSKI

Tokyo Stocks Rise on Bargain Hunting

Tokyo's benchmark stock index rose Friday on bargain hunting despite weaker-than-expected economic data on corporate sentiment, sending the dollar to a new five-month high against the yen

World Bank OKs Wolfowitz As New President

Paul Wolfowitz, the Bush loyalist and deputy defense secretary who helped plan the Iraq war, won the unanimous approval of the World Bank's board to become the next president of the

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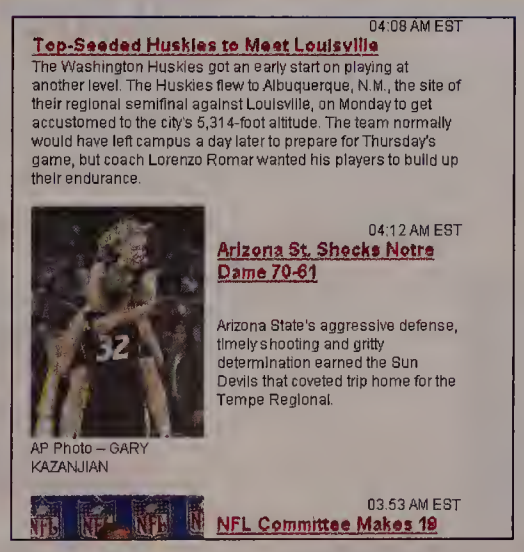

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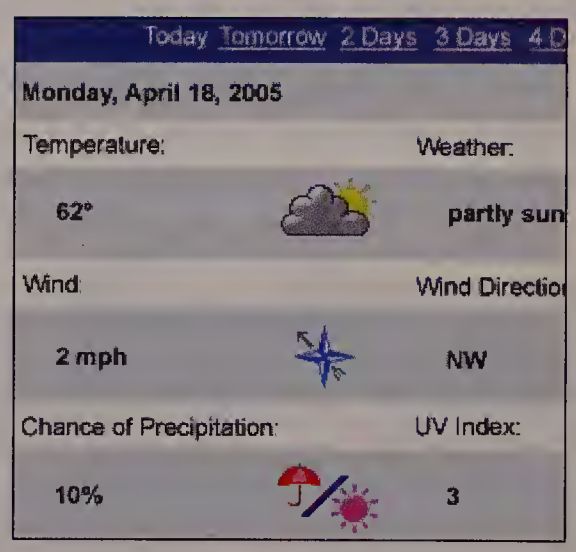

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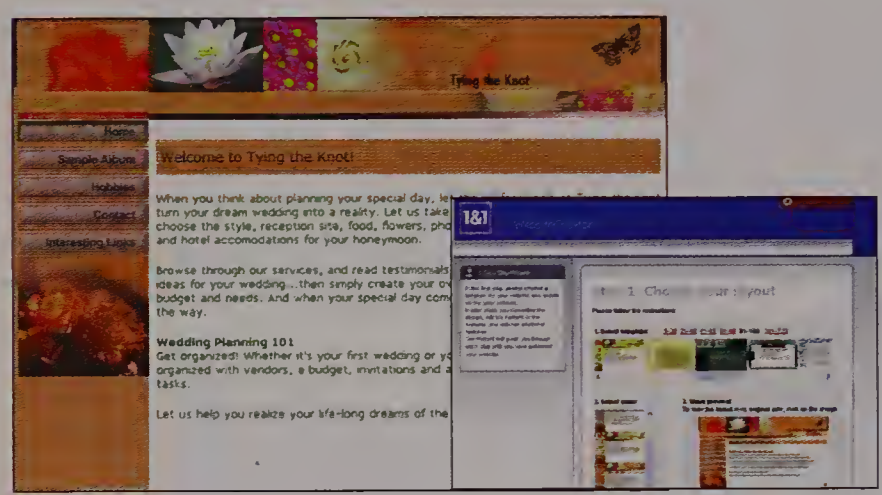

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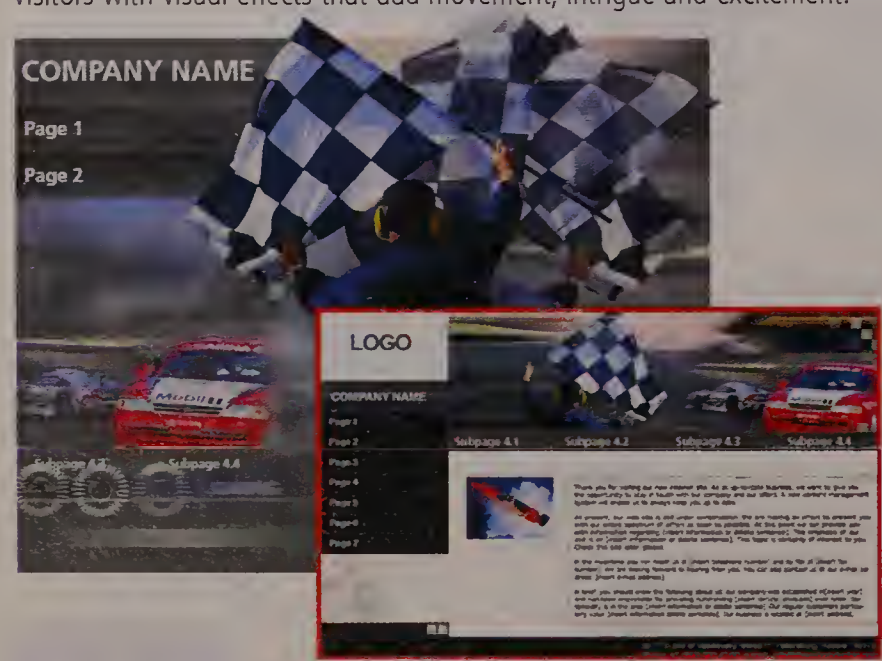

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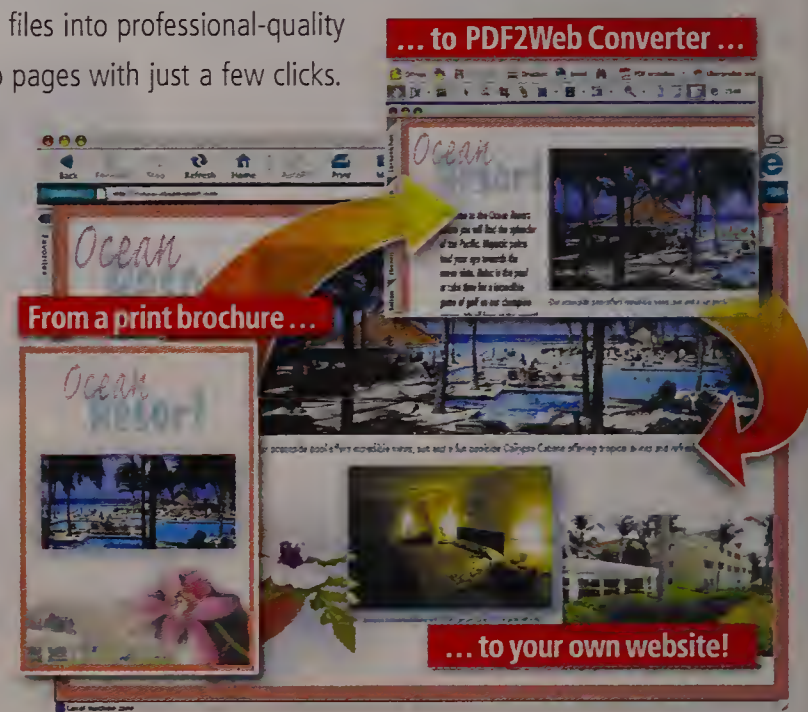

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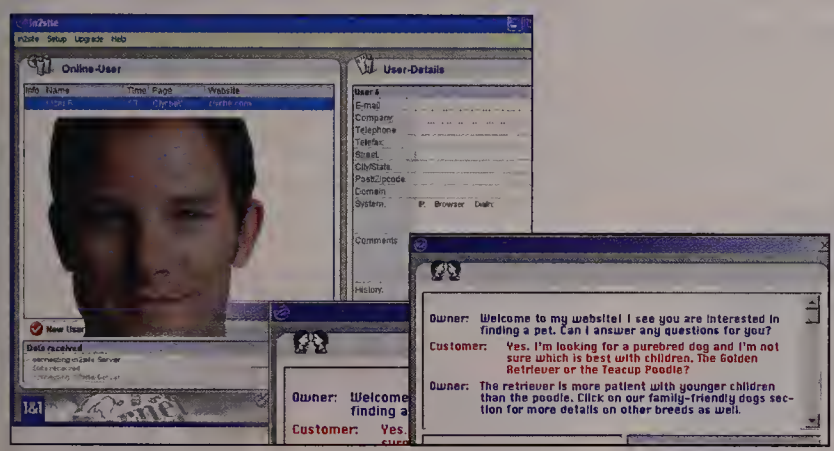

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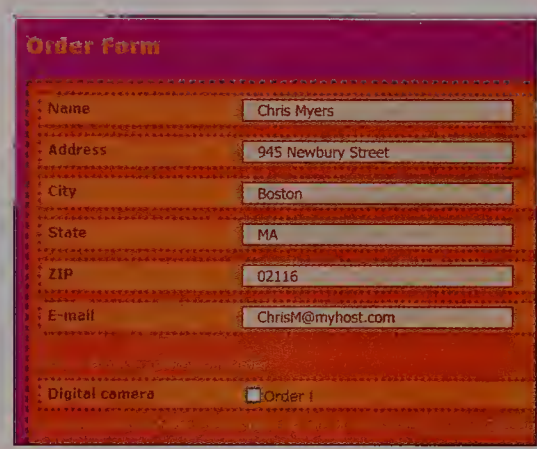

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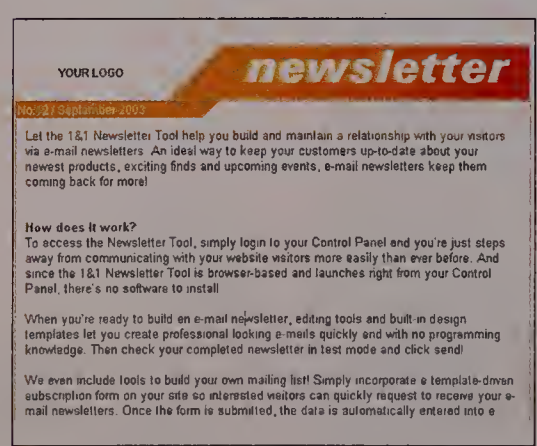

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E-MAIL		
E-mail accounts w/ 1 GB space each	200	200
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Spam filtering for all accounts	✓	✓
Virus protection for all accounts	✓	✓
SECURITY FEATURES		
Protected by up-to-date firewall	✓	✓
Daily backups	✓	✓
Password protected directories	✓	✓
Dedicated SSL Certificate	optional	optional
SUPPORT		
24/7 phone support	✓	✓
24/7 e-mail support	✓	✓

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No setup fee

INCLUDES 3 DOMAINS

PACKAGE FEATURES		
Web space	2,000 MB	2,000 MB
Monthly transfer volume	50 GB	50 GB
FTP accounts	5	5
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
Chat channels	5	5
1&1 WebStatistics	✓	✓
In2site Live Dialogue	✓	✓
1&1 Newsletter Tool	✓	✓
1&1 WebElements	✓	✓
SITE-BUILDING TOOLS		
1&1 Dynamic Content Catalog	✓	✓
PDF2Web Converter	✓	✓
DynamicSiteCreator	✓	✓
Graphic archive	✓	✓
WebsiteCreator	18 pages	18 pages
Software suite worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
Perl, PHP3, PHP4, and PHP5	✓	–
1&1 WebDatabase	✓	✓
Database	1 MySQL	MS Access
Cron Jobs	✓	–
SSI (Server side includes)	✓	✓
DOMAIN NAMES		
Included Domains	3	3
Subdomains	50	50
Run multiple independent sites	✓	✓
Full DNS management	✓	✓
E-MAIL		
E-mail accounts w/ 1 GB space each	500	500
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Spam filtering for all accounts	✓	✓
Virus protection for all accounts	✓	✓
SECURITY FEATURES		
Protected by up-to-date firewall	✓	✓
Daily backups	✓	✓
Password protected directories	✓	✓
SSH Secure Shell Access	✓	–
Dedicated SSL Certificate	optional	optional
SUPPORT		
24/7 phone support	✓	✓
24/7 e-mail support	✓	✓

DEVELOPER PACKAGE

$19.99 PER MONTH

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INCLUDES 5 DOMAINS

PACKAGE FEATURES		
Web space	4,000 MB	4,000 MB
Monthly transfer volume	100 GB	100 GB
FTP accounts	25	25
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
Chat channels	10	10
1&1 WebStatistics	✓	✓
In2site Live Dialogue	✓	✓
1&1 Newsletter Tool	✓	✓
1&1 WebElements	✓	✓
SITE-BUILDING TOOLS		
1&1 Dynamic Content Catalog	✓	✓
PDF2Web Converter	✓	✓
DynamicSiteCreator	✓	✓
Graphic archive	✓	✓
WebsiteCreator	25 pages	25 pages
Software suite worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
ASP.NET, .NET Framework	–	✓
Perl, PHP3, PHP4, and PHP5	✓	–
1&1 WebDatabase	✓	✓
Database	3 MySQL	MS Access, MS SQL
Cron Jobs	✓	–
SSI (Server side includes)	✓	✓
Perl Script Output Monitor	✓	–
Perl Syntax Checker	✓	–
DOMAIN NAMES		
Included Domains	5	5
Subdomains	200	200
Run multiple independent sites	✓	✓
Full DNS management	✓	✓
E-MAIL		
E-mail accounts w/ 1 GB space each	1,000	1,000
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Spam filtering for all accounts	✓	✓
Virus protection for all accounts	✓	✓
SECURITY FEATURES		
Protected by up-to-date firewall	✓	✓
Daily backups	✓	✓
Password protected directories	✓	✓
SSH Secure Shell Access	✓	–
Dedicated SSL Certificate	✓	✓
SUPPORT		
24/7 phone support	✓	✓
24/7 e-mail support	✓	✓

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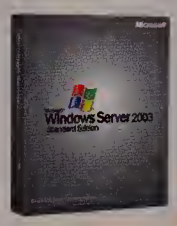

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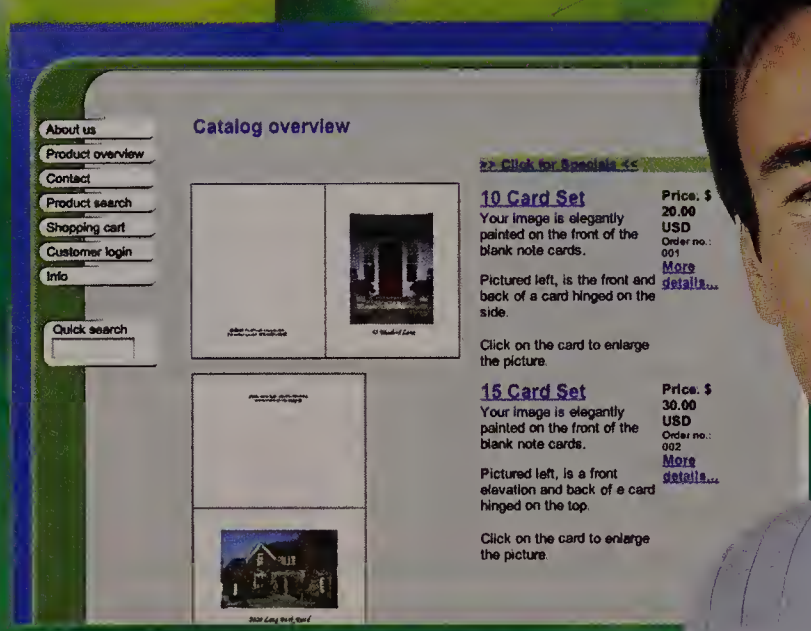

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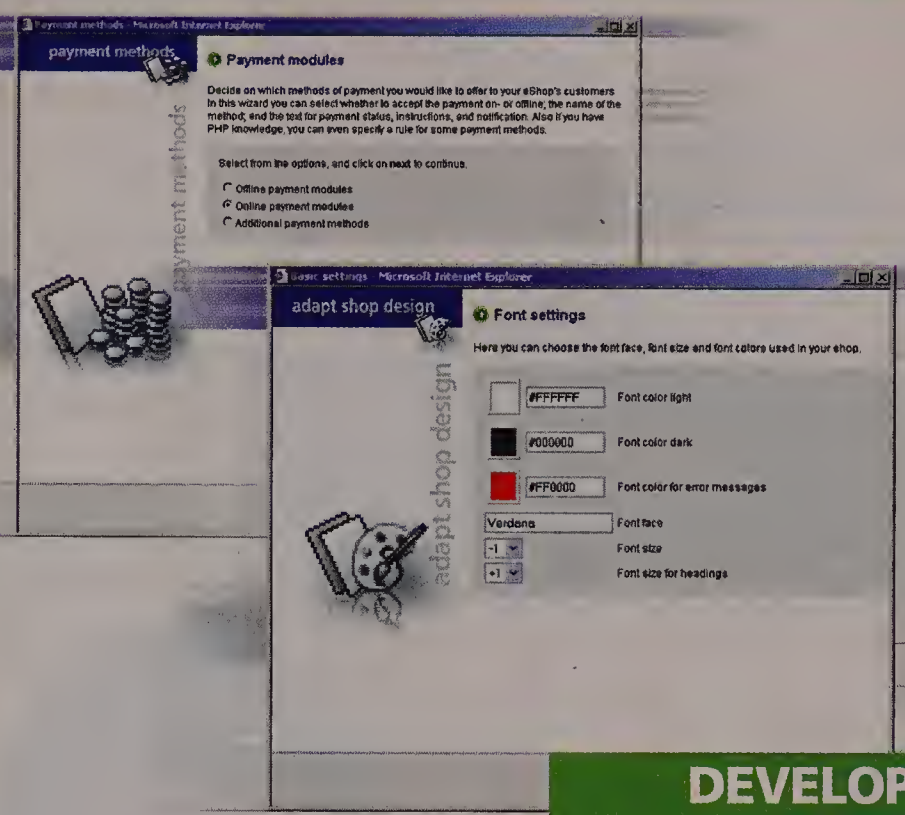

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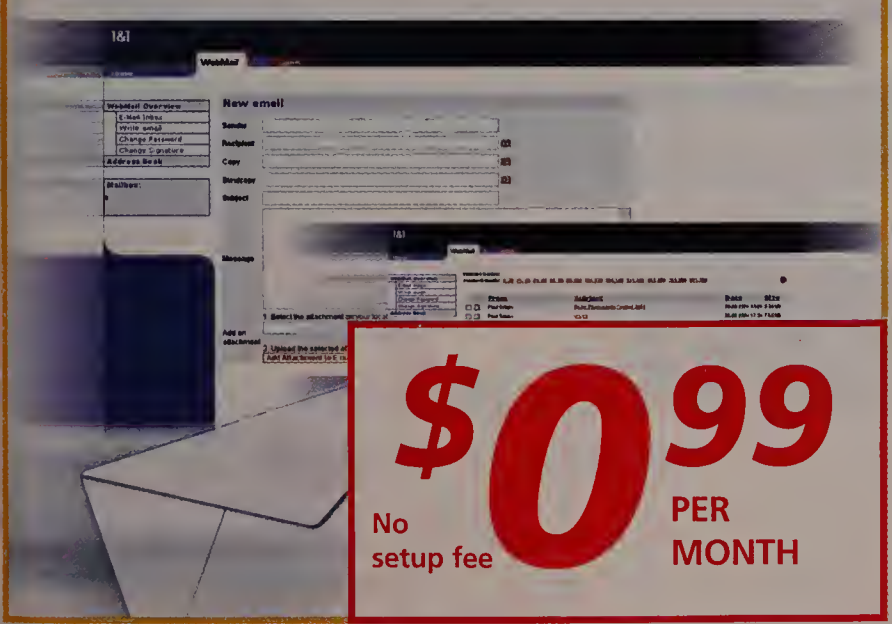

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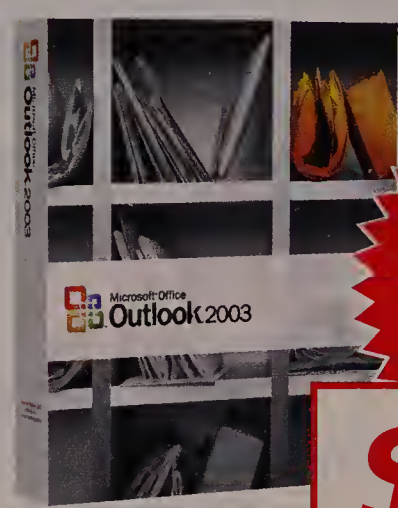

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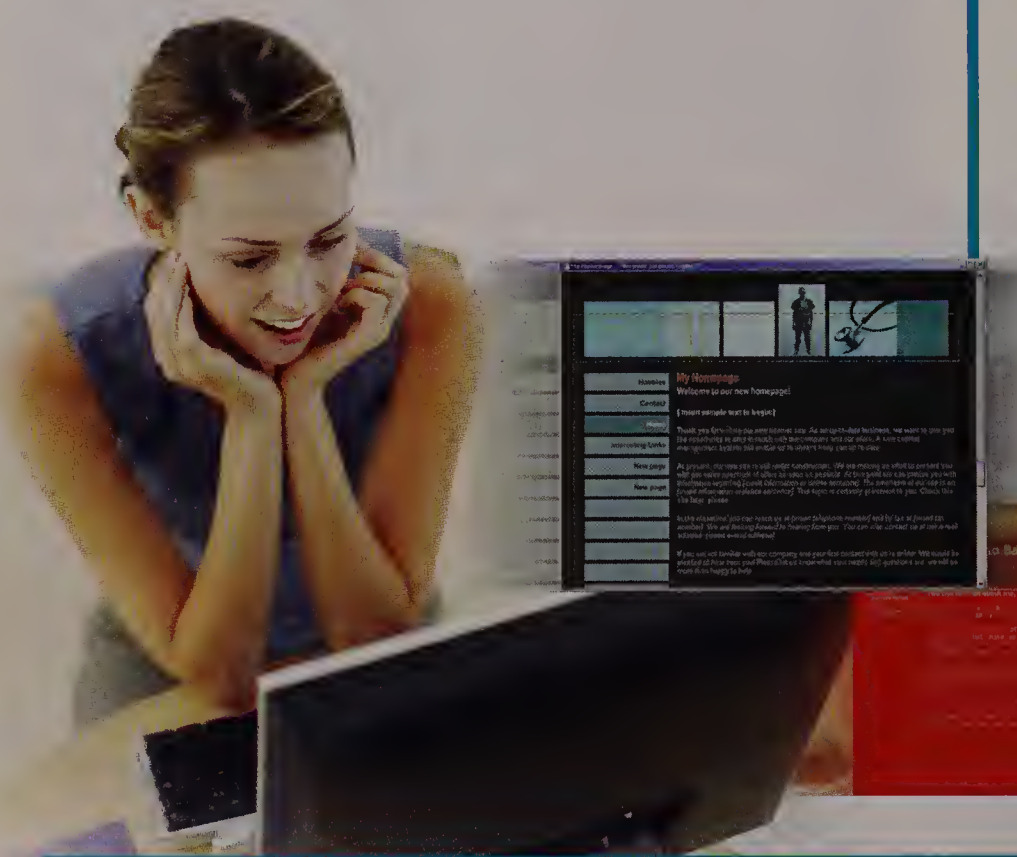

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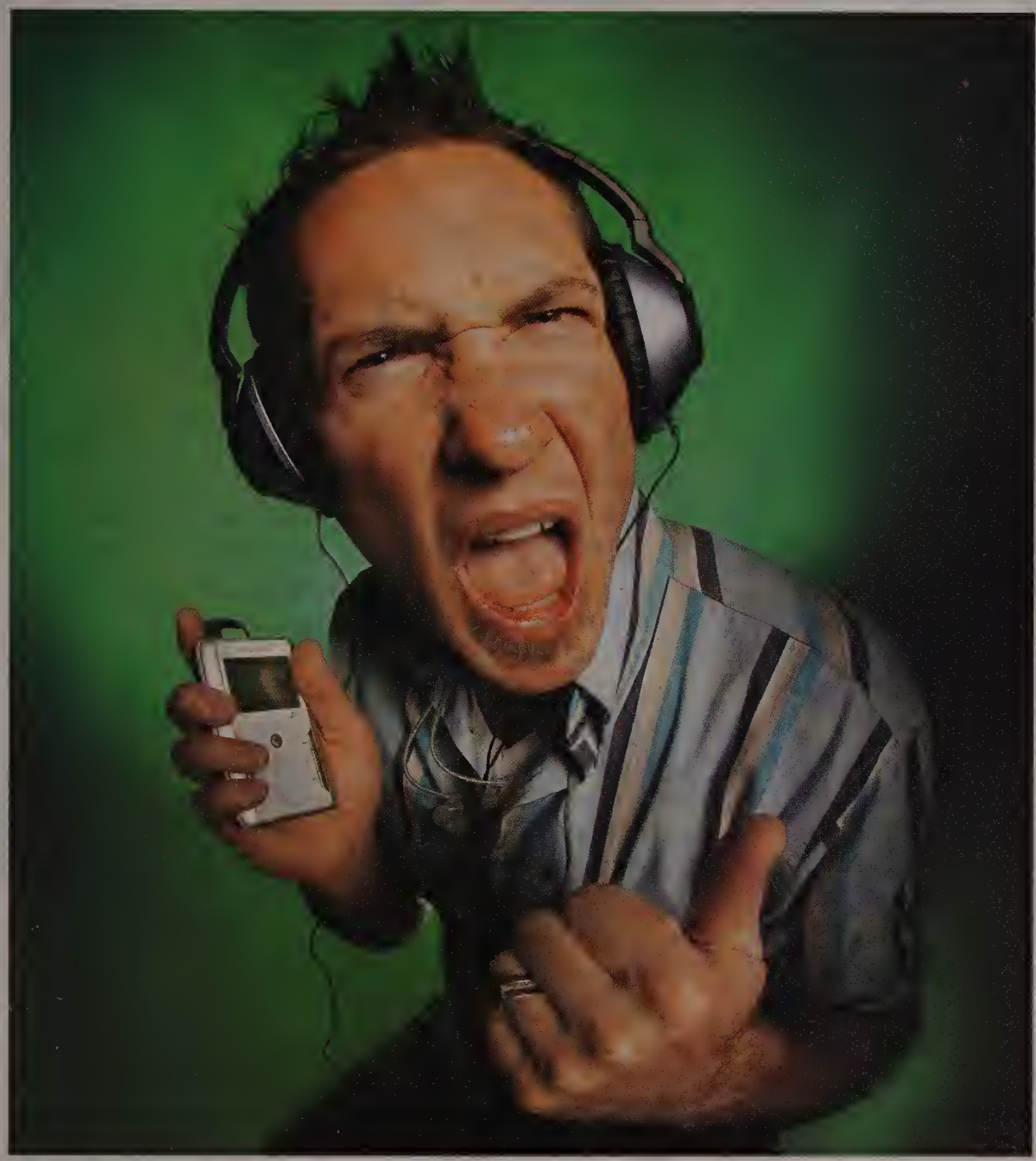
139 DUMP YOUR BAD HEADPHONES | 144 VIDEO, TUNES HIT CELL PHONES | 146 IMPROVE NORMAL TV ON AN HDTV



MUSIC TO YOUR EARS

GOT THE BLUES BECAUSE YOUR PRICEY AUDIO PLAYER CAME WITH CRUMMY EARBUDS? OUR FAVORITE REPLACEMENT HEADPHONES WILL JAZZ UP YOUR LISTENING. BY RICHARD BAGULEY

WE HATE TO BREAK it to you, but the headphones that came with your fancy new portable music player probably sound awful. Even companies that spend big money designing players to produce the best possible sound often skimp on the quality of the headphones they toss into the box.

You don't have to settle for less. If you replace the bundled headphones with a better set, the improvement can be staggering, restoring crisp beauty to formerly muffled music. And the new set will do an excellent job of reproducing audio from laptop or desktop PCs as well.

For this review, we examined six models that cover the ear and six units that sit in or next to the ear; these span a wide range of prices (from $8 to $400). Most over-the-ear models use a headband to hold the speakers in place (except the Koss KSC75 set, which clips over the ears). The over-the-ear units can be big and bulky, but a few fold or flatten for quick storage.

The in-the-ear models are smaller and easier to carry on a trip. They come in two ▶

PHOTOGRAPH: CHIP SIMONS

types: earbud and ear-canal. Many portable music players ship with a pair of earbuds in the package; none offer the superior ear-canal type.

Personal preference generally governs the choice of headphone. Although typically you can't try in-the-ear models before buying, you can approximate the ear-canal experience using cheap foam earplugs. Try wearing them for a few hours—if you don't find them uncomfortable, you should be fine with a pair of in-the-ear headphones.

We selected a Best Buy in each of our two headset categories. Bose's TriPort was our favorite over-the-ear model, while Etymotic Research's ER-6isolator took top honors for in-the-ear headphones. (For details about how we tested all the headphones, go to find.pcworld.com/48032.)

OVER-THE-EAR HEADPHONES

AKG K26P

★★½☆☆ $40

THE K26P SET HAS several hinges for folding into a small space. This industrial look has a downside, however: During

adjustments hair tended to get tangled in the clasps, and the headphones pinched the scalp. Though the closed style of the set's earpieces produced good sound isolation, they generated lackluster, muffled sound, with overly strong bass that drowned out the midtones. find.pcworld.com/48016

Bose QuietComfort 2

★★☆☆☆ $300

BOSE'S BATTERY-POWERED QuietComfort 2 headphones set employs an active noise-

cancelling system to reduce low-frequency noises such as those made by engines and PC fans. When switched on, the system did a very creditable job of eliminating stray sounds, reducing background noise to much more comfortable levels. But it didn't block high-frequency noise well.

The set won't work even as normal headphones without battery power. To be fair, the batteries lasted over 30 hours in our tests, and you get a low-charge warning (a flashing LED) when you have only a few hours of battery life remaining. Be sure to pack extra batteries on a long trip, because the ability to block noise is the only really commendable thing about these headphones. They produced flat and muddy bass tones and clipped high tones. This poor sound quality may be a result of the noise cancellation, but as you can't listen to music without the feature turned on, there's no way to tell. And at $300, this set isn't cheap (although it does come with a nice carrying case and an airline headphone adapter). find.pcworld.com/48018

Bose TriPort

★★★★☆ $150

Best BUY ALTHOUGH our testers had mixed opinions about most of the headphones, they all liked the Bose TriPort. And it's easy to see why: The speakers fitted comfortably over everyone's ears and they sounded great, with sharp, clear trebles. Bass notes were smooth and rounded, with the feel of a large, open room. The headphones were a little on the quiet side—at the same volume setting, less sound came out of these speakers than on some other models. But they can handle plenty of volume if you like it loud, as well, and they block a lot of background noise without clamping down too tightly around your ears.

A couple of minor annoyances: The ear cushions occasionally made a crinkling noise when they moved (especially on testers who wear glasses), and there was a lot of leakage (the person sitting next to you might not share your taste in music). The TriPort is also a bit large: It can't fold up, and it doesn't come with a carrying case. Nevertheless, this is a solid pair of headphones for anyone who doesn't mind the extra bulk. find.pcworld.com/48020

Koss KSC75

★★★½☆ $15

THE KSC75 SET takes a different approach to over-the-ear design: Two clips hold the headphones in place behind the ears. This can be a definite plus for people who have hairstyles that aren't headband friendly or who don't care for headbands. Also, the KSC75 stays in place reasonably well once properly seated.

At just $15—the least expensive over-the-ear model we tested—the KSC75 set sounded surprisingly good, with decent bass response and reasonable (though slightly muted) treble. Leakage is this model's weakest point: The KSC75 doesn't block out ambient sound, and anyone near you can hear your music almost as clearly as you can. These headphones are not meant for everybody. Thrash metal enthusiasts, for example, should opt instead for a large pair of enclosed headphones—especially if you sit next to other people on the bus. find.pcworld.com/48022

Koss KTX Pro1

★★★☆☆ $20

SEVERAL TESTERS found the KTX Pro1 set the most comfortable of the small over-the-ear headphones, thanks to a unique sling on the headband

PHOTOGRAPHS: KEVIN CANDLAND

that keeps it from pinching the scalp. The speakers stayed firmly in place without too much pressure—suitable for long road trips or flights.

But the headphones' open style keeps them from blocking ambient noise, and they leak a lot. We clearly heard the music from a couple of feet away even when it played at a low volume setting.

Like the Koss KSC75 headphones, the KTX Pro1 sounded good, with rounded, full bass. We heard some slight distortions to high-pitched sounds, though (such as high-

hat cymbals), and high voices sounded a bit hissy and rough. You get no carrying case, but the headphones do come with a built-in volume control and a quarter-inch plug adapter. find.pcworld.com/48023

Sennheiser PXC250

★★★★☆ $130

THE PXC250 HEADSET uses Sennheiser's NoiseGard active noise-cancelling technology, which does a good job of blocking repetitive low- and midfrequency noise but is less effective with high-pitched noise. Though you can choose to listen without the noise-cancellation feature, it amplifies the audio substantially. We also noticed a slight (but annoying) hiss in the background when the noise cancelling was active. Unlike the

Bose noise-reduction set, this model still works (albeit without noise cancellation) if you remove the two AAA batteries, or if they die.

And the PCX250 generates pretty respectable results, producing clear, well-balanced audio. The bass sounded a little weak, but turning on the noise-reduction feature boosted the output somewhat and added warmth and extra volume to the sound.

The noise-reduction circuits are located in a cigar-shaped box on the cable, which adds bulk and the potential for tangles. But the headphones fold up for convenient storage, and Sennheiser includes a nice case as well as quarter-inch and airline adapters. A similar set of headphones, the PX200, uses the same speakers but lacks the noise-reduction capability; it costs merely $40. find.pcworld.com/48024

IN-THE-EAR HEADPHONES

Etymotic ER-4 MicroPro

★★★½☆ $220

THE ETYMOTIC RESEARCH ER-4 MicroPro set has been around for several years, but it is still a great pair of headphones. We found it produced

well-balanced, clear sound with plenty of bass and presence, while preserving the subtle, high-frequency details that make music come alive.

On our test track of a Ry Cooder guitar solo, the sound of the guitar pick sliding across the bass strings was so clear it seemed as if Ry were sitting right next to us. The ER-4 also provided the best sound isolation of any headphone set in this review: We could barely hear the loud rumble of a nearby ferry engine while wearing it. But for best results you must place the pieces pretty deep and tightly in the ears, a position that many users may find uncomfortable. Still, if you can tolerate foam earplugs, you'll like these headphones a lot. find.pcworld.com/48025

Etymotic ER-6isolator

★★★★☆ $120

Best BUY ETYMOTIC produces two versions of the ER-6 headphones: the standard black model and the white ER-6isolator, which the company designed specifically for use with Apple's IPod. Both of these small and well-designed in-the-ear headphone models produced strong, clear sound with crisp trebles. However, the bass was a little thin, lacking some of the body and depth that we heard on the ER-4 and Shure headphones.

The two Etymotic models have slightly different characteristics: The 6isolator is a little less apt to impede the flow of sound signals, making the set easier for a portable player to drive. It also had a slightly better bass response, with the music sounding a bit fuller in our informal tests.

We have a few gripes with

this model, but not about the sound quality. First, Etymotic supplies only two pairs of tips with each set: one soft rubber and the other foam, which may not suit everyone. Other makers of ear-canal headphones ship their products with a much larger variety of tips for different ear sizes. We also thought the cable leading to each earphone looked a little thin and fragile. Despite those reservations, however, this is a terrific set of headphones that produces good sound. And at $120, it's a great value for the money. find.pcworld.com/48026

Koss KSC9

★★☆☆☆ $15

THE KSC9 SET has an innovative design, with what Koss calls a Sportclip—it fits over each ear to hold the headphones in place, making them look rather like a mutated Bluetooth headset. The head-

phones sit pretty comfortably and snugly on the ears, however, and despite their odd shape aren't likely to fall out even during vigorous exercise.

Unfortunately, the headphones' sound quality ▶

gave us less to cheer about: We found weak bass and a general lack of presence. Compared with the performance we got out of the other in-the-ear models, the KSC9's music sounded as if it were being played behind a curtain. Go for a well-fitting set of earbud headphones instead. find.pcworld.com/48027

Sennheiser MX300

★★★☆☆ $8

WE DIDN'T EXPECT much out of the least expensive pair of earbuds; but the MX300 set exceeded our expectations easily, producing good sound with deep bass and clear midtones. One slight disappointment: The bass was a little overpowering, washing out

subtle details at times. But some listeners may like their bass that heavy.

Each earbud fit well, with or without the foam cover. Even testers who had problems with other earbud-style headphones discovered that the Sennheiser pieces sat comfortably and stayed in place. The MX300 pair seems well suited to situations where you want to retain some ability to hear ambient sounds, such as when you work in the garden. find.pcworld.com/48028

Shure E4c

★★★★½ $300

SHURE'S NEWEST addition to its line of high-end ear-canal headphones, the E4c, issued strong audio, with deep, round bass and accurate treble. At

$300, the set had better sound amazing, and it didn't disappoint—but it didn't have quite the range of the company's more expensive E5c model.

The E4c earpieces fit comfortably and come with a variety of tip sizes. One interesting touch: Shure designs its earphones so that you can wear them either with the cables looped over the top of the ears or in more conventional fashion with the cables dangling down.

No matter which way we wore them, the E4c earpieces were easy to fit into the ear canal, and when properly inserted blocked most ambient noise, producing a quieter environment than either of the noise-cancelling over-the-ear headphones we evaluated. find.pcworld.com/48030

Shure E5c

★★★★☆ $400

THE SHURE E5C headphones are designed for professional musicians, so it's not surprising that they generate great sound. One of our test music clips, Shirley Bassey's rendition of the classic tune "Big Spender," seemed especially appropriate for evaluating this $400 set, but you get a lot for your money: The E5c produced the best sound of all the in-the-ear models, with deep, booming bass and bright, sharp trebles that sounded as good as those of any of the over-the-ear models we tested.

But these pieces are a hassle to fit: Several of our testers had problems trying to seat them properly inside the ear canal, even though Shure supplies several different-size tips (including foam and flanged-rubber ones) and even gave us some additional tips.

Once you loop the cables over your ears, though, the pieces aren't going anywhere. It's a pain to put them on, but once they're on, they stay in place. Another nice design touch: The headphones sit flat against your ears and don't stick out, so you can lie down while you listen without fear of damaging the pieces.

One note of caution: Some portable music players may not be powerful enough to drive these headphones. We tested them with a variety of hard-drive audio players, however, and experienced no difficulties. If you run into any problems, you (or your personal assistant) can locate several models of portable amplifiers that will boost the signal. find.pcworld.com/33248 ■

Richard Baguley is a freelance technology writer based near San Francisco. Say what you will to him: When he's wearing his headphones, he can't hear you.

THE SCIENCE OF SILENCE

Noise Cancellation 101

FEW THINGS ANNOY people more than the din inside an aircraft—except, perhaps, being stuck on a noisy plane between a snoring executive and an unhappy child. That's precisely why the makers of headphones tend to advertise in in-flight magazines; they know that, after a couple of hours, you'll be desperate for a little peace and quiet.

Headphones that promise to block outside noise do so in one of two ways: passively or actively. Passive headphones rely on the fact that sticking things in your ears makes it harder for noises from the outside to penetrate. In-the-ear headphones such as the Shure E4c and the Etymotic ER-6isolator fit like earplugs, sealing the ear canal tight so sounds can't get in.

Active noise-cancelling headphones go a step further: They "listen" to the environment and create an inverse sound that (in theory) cancels background noise. The air pressure waves that make up sound, like waves in water, have peaks and troughs; an inverse sound has peaks where the ambient sound has troughs, and vice versa.

We received mixed results with both of the active noise-cancelling headphones in our test group, the Bose QuietComfort 2 and the Sennheiser PXC250. Although each set blocked at least some ambient noise, neither blocked all of it. Low-frequency noises (such as those of jet and bus engines) decreased significantly, but high-frequency noises persisted. And neither of these models was as effective as the ear-canal headphones, which, when properly fitted, blocked all outside noise equally well.

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HANDSETS

LET THESE ENTERTAIN YOU

NEW CELL PHONES COME OUTFITTED FOR LISTENING TO MUSIC AND WATCHING TV ON THE GO.

What's on TV?

DESIGNED FOR the latest high-speed cellular data networks, LG's VX-8100 and Nokia's 6682 take video to new levels. The LG—a CDMA and EV-DO handset—is outfitted for Verizon's VCast TV service, which brings snippets of such programs as *The Daily Show* to cell phones. Pricing and shipping information for the VX-8100 was not available at press time.

VIDEOCAMS, TOO

BOTH HANDSETS CAN capture small snapshots, play music, and record videos. But whereas the $350 GSM- and EDGE-enabled Nokia can record a 1-hour video clip, the LG maxes out at 15 seconds. Videos on a preproduction Nokia looked bright but grainy and occasionally choppy. The preproduction LG's video quality was worse: dark and mottled.

These phones have memory card slots for holding data downloaded from the carrier's site, and for transferring photos, videos, and other content to and from a PC (with a card reader). The Nokia phone ships with a 64MB Reduced-Size MultiMediaCard (RS-MMC). LG doesn't bundle a card, but you get a generous 512MB of internal memory.

For standard phone functions, the LG's intuitive menus and well-marked buttons (for quickly accessing apps and content from the service provider) make it easier to use than the Nokia. The LG's speaker and volume controls beat the Nokia's, which were so poor that I could scarcely hear the people at the other end. Fortunately, the Nokia did sound better on speakerphone than when held to the ear.

—Grace Aquino

J-Lo and Usher are on the phone.

BOTH THE KYOCERA Slider Remix KX5 and the Sanyo MM 5600 try to free you from having to carry separately a cell phone and an MP3 player. Both phones will play MP3 and AAC music files. If Sprint is your carrier and you have an MM 5600, you can hear streamed music over the Mspot radio and video service.

These phones won't satisfy a music fan who wants hundreds of tunes on hand at all times. Neither the Kyocera, which will not be available until late August and hasn't been priced yet, nor the Sanyo ($430 from Sprint) has onboard memory for music. Instead, each includes a micro-SD Card slot through which you can add up to 512MB of tracks, enough for about 8.5 hours of music encoded at 128 kbps.

SOUND STORY

THE SOUND QUALITY of both phones was surprisingly good. But for best results, you'll need headphones equipped with a jack even smaller than the one used for most portable audio players (or you'll need a converter jack). I was sorely disappointed by the $6-per-month Mspot service, which I tested over the Sprint network in the San Francisco Bay Area. Regrettably, service cut in and out, and the sound quality was atrocious.

—Edward N. Albro

PHOTOGRAPHS: KEVIN CANDLAND

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GADGET FREAK

DAN TYNAN

Dodge the Fuzz: Make Plain TV Shows Look Good in HD

ONE RECENT afternoon I turned on my digital projection TV and flipped over to ESPN. Shaquille O'Neal was taking it hard to the hoop. At least, I think it was Shaq. It might have been Oprah doing Jazzercise, or possibly a commercial for *Fat Albert*.

The problem? I was viewing a standard-definition channel on a 90-inch high-definition display. Everybody appeared fuzzy around the edges, like they were wearing angora sweaters. When HDTV sets display standard-definition content—the vast majority of today's programming—the images don't always look so well defined. And the bigger the image, the worse it gets.

First, a little geekspeak is in order. An SD picture consists of 480 lines of pixels that are interlaced (480i), which means that every other line gets scanned 30 times a second. (So the screen redraws lines 1, 3, 5, and so on, and then it starts over with lines 2, 4, 6...you get the picture.)

HD content is usually formatted at 720 lines or 1080 lines, and it can be interlaced (720i, 1080i) or progressive (720p, 1080p). Progressive scanning draws the screen without skipping lines. With its faster frame rates and higher resolutions, HD kicks SD's booty in clarity and crispness.

Broadcasters and cable operators attempt to compensate by "scaling" or "upconverting" SD pictures—essentially, adding more lines to increase the image's resolution. How well they accomplish this partly determines whether you can tell Shaq from Oprah. The amount of compression your cable or satellite provider uses also affects SD quality.

What can you do about it? I asked some experts and came up with a few steps you can take to improve the picture on your new big-screen set.

Upgrade your set-top box: If you don't already have a digital set-top box, get one. They provide a cleaner feed, which can lead to a sharper picture, says Tom Galanas, vice president of operations for 6th Avenue Electronics (www.6ave.com) in New York. But if you still have an antenna bolted to your roof, consider using it for broadcast channels—uncompressed over-the-air signals can offer superior picture quality.

> When HDTVs display standard content, the images don't always look so well defined.

Improve your connections: The more data that reaches your set, the better the picture. If your DVD player, set-top box, or TV has a High-Definition Multimedia Interface (HDMI) or digital visual interface (DVI) connector, use it. If not, component video is best.

Unsplit your cable: Running separate coaxial lines from your cable hookup to each TV and cable modem you use could improve the picture. You'll probably need your cable tech to handle this one.

Lose the wide screen: Some HDTV sets stretch an SD feed to fit HD's 16:9 aspect ratio. You can usually turn this feature off and watch the program in its natural 4:3 ratio, which frequently results in less distortion and a sharper picture, says Jake Ludington, author of the MediaBlab blog (www.mediablab.com).

Throw money at the problem: More-expensive sets and DVD players come with built-in scaling technology—such as Philips's Pixel Plus or Pioneer's PureVision—that enhances low-res pictures as they're displayed. Such features can add $1000 to the cost of a big-screen set. You can also a buy stand-alone upscaler ($1000 to $5000) if you don't have one built in.

As HD content replaces SD, these problems will gradually fade. Meanwhile, one thing is crystal clear: Either Shaquille needs to work on his interpersonal skills, or Oprah has got some serious game. ■

Contributing Editor Dan Tynan lives to plug his upcoming best seller, Computer Privacy Annoyances *(O'Reilly Media, 2005).*

ILLUSTRATION: BARRY BLITT

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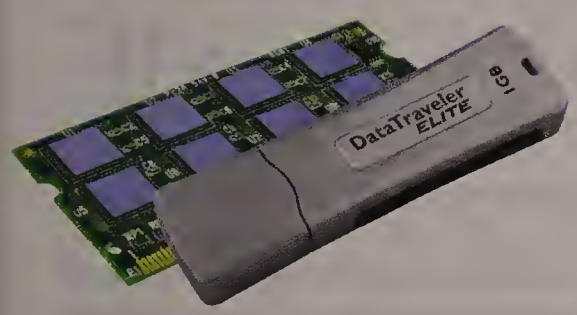

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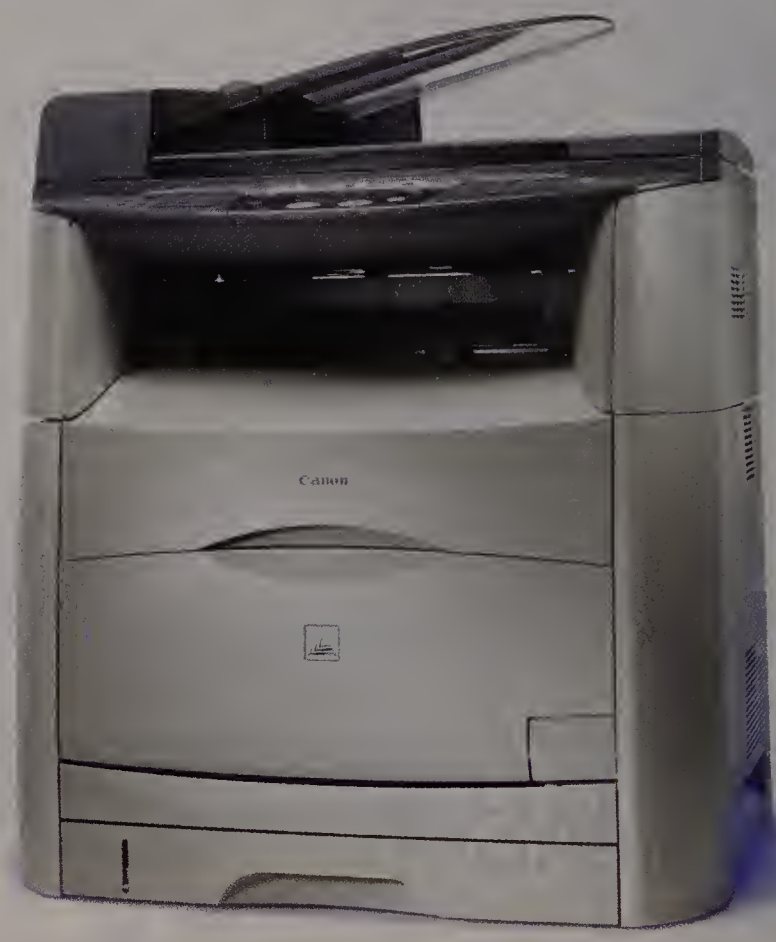
SPOTLIGHT: LASER MULTIFUNCTION PRINTERS

THE DIFFERENT SHAPES OF MFPs: Brother's MFC-8840DN (left) and Canon's ImageClass MF8170C, both Editor's Picks.



All-in-One Lasers That Do It All

We test seven space-saving laser MFPs, including three that print in color.

COPY, SCAN, FAX, and print: Four separate machines could handle those needs, but why tax your budget and your desk space when one machine can do it all? Most laser multifunction printers today handle all four tasks with more flair than inkjet MFPs and with performance rivaling that of stand-alone units. A handful of laser MFPs even let you add eye-catching color to your documents.

Selecting a laser MFP can be complicated, given the number of features to use as buying criteria. Still, MFPs can be a good deal if you know what you want.

The PC World Test Center ran seven laser MFPs through their paces, testing their printing, scanning, and copying output. We also tried linking the network-ready models to our office's local-area network, which in some cases opened up a world of additional features (see "Navigating the Networking Maze" on page 151).

PICKING THE RIGHT MFP

ONCE YOU'VE SETTLED on purchasing an MFP rather than a stand-alone product, you need to decide whether an inkjet or a laser model better suits your needs. The choice is easy if you use your printer for business. Inkjets can produce colorful documents and outstanding photos (see June's *Top 10 Printers*, find.pcworld.com/47662), but they simply can't match the speed and professional document quality of a laser printer. And now that color has arrived in lower-cost laser MFPs, you no longer have to sacrifice color for sharp text quality in business documents.

Nor do you have to sacrifice quality: Most of today's laser MFPs compare favorably to dedicated laser printers in speed and print quality. Monochrome

PHOTOGRAPHS: MARC SIMON

155 DESKTOP PCs
This month's chart features four new systems—including the Xi Computer MTower SP, which debuts in first place on our power chart.

157 NOTEBOOK PCs
IBM's new ThinkPad T43 earns our Best Buy in the desktop replacement category; the ThinkPad R52, also new, takes third in the all-purpose category.

159 MONITORS
Our Top 10 chart this month is split to showcase not only 19-inch LCD screens, but also the latest and greatest roomy 23- and 24-inch LCDs.

161 GRAPHICS BOARDS
Boards based on ATI's Radeon X850 chip set lead the power section of our chart; models based on NVidia's 6800GT chip set follow close behind.

163 MORE REVIEWS
Inkjet multifunction printers and space-saving PCs headline our recap of products that made the *Top 100* charts in previous months.

161

laser MFPs continue to offer a good range of office-oriented features and match the performance of single-function printers. Color laser MFPs are packed with features, too, but they're often slower than their stand-alone competition.

Unfortunately, in scan quality, laser MFPs usually fall short of the mark that single-function products set. And though an MFP typically comes bundled with an automatic document feeder, you usually won't get a transparency adapter—a common accessory for ordinary scanners.

MONO: THE VALUE OPTION

JUST AS WITH stand-alone laser printers, if you're willing to give up color, your all-in-one will give you better performance for your dollar. The monochrome laser MFPs we tested performed at about the same level as their single-function counterparts, for a cost of only a few hundred dollars more. Each of the models that we evaluated—including our Best Buy, Brother's MFC-8840DN—costs $500 or less, and can handle even a busy home or small office's daily work output.

The average monochrome text speed for the MFPs we tested was 14.5 pages per minute, versus 14.2 ppm for similarly priced stand-alone laser printers from our November 2004 roundup (find.pcworld.com/44248). The single-function lasers we examined printed grayscale graphics only slightly faster than the MFPs did, averaging 7.4 ppm versus 6.1 ppm. The MFP with the fastest text printing performance was the monochrome Samsung SCX-4720F at 16.3 ppm, followed closely by the Brother MFC-8840DN. (We first tested the Brother back in October 2004. This month we retested it so that we could include hands-on testing on a network.)

Though monochrome print speeds impressed, print image quality was more of a mixed bag. The Brother and Samsung led the way, generating clean, razor-sharp text and crisp line art. The Brother MFP excelled at printing grayscale graphics, showing smooth transitions in our test photo. The Canon ImageClass MF5750 and the HP produced middling results: Both units output generally clean text documents but had serious problems on grayscale graphics. The HP model tripped over itself on our test black-and-white photo: The printed image revealed pixelation and distinct moiré patterns.

SAMSUNG'S SCX-4720F has a front USB port for printing directly from a storage drive.

As with text speeds, the scanning speeds of this crop of monochrome laser MFPs matched those of stand-alone scanners fairly well. (Note: All of the monochrome laser MFPs we tested can scan in color.) They scanned a sample color document in 31.4 seconds on average, compared with 35.5 seconds for stand-alone scanners. And though some monochrome MFPs outperformed the color ones, none of the all-in-ones produced scan quality up to the level of a stand-alone scanner. In fact, many of our test scans struggled with skin tones and color accuracy, and some looked dull and fuzzy.

Of the monochrome group, the Canon fared best overall on scan quality, while the compact HP LaserJet 3030 did worst, hampered by reddish, fuzzy graphics (text documents looked markedly better). The Brother unit also produced accurate colors in printouts of scanned output.

In copier mode, the monochrome units all tested within a second or two of each other, but exhibited a wide range of image quality. The Brother and the sensibly designed Canon MF5750 did best at copying; the Samsung had some issues, however, producing light, jagged lettering.

The Brother and the Samsung stand out among the monochromes for their extra features. Brother includes ScanSoft's PaperPort software and a built-in duplexer, a good deal given the printer's sub-$500 price. Samsung offers a nifty extra USB 2.0 port so you can print directly from a USB storage device such as a flash drive or hard drive. Both models also supply a plethora of fax presets—a plus for offices with a heavy load of daily faxing.

ADD A SPLASH OF COLOR

BRIGHT COLORS CAN liven up any document, whether it's a marketing report, a brochure for your business, or a program for your child's swim meet. Color laser MFPs offer one-stop shopping for anyone who needs to print in color, but you'll have to accept more trade-offs if you choose one over a single-function color laser printer. Two of the color devices we saw—Canon's ImageClass MF8170C ▶

(our Best Buy) and HP's Color LaserJet 2840—each cost $999; the third model, Xerox's $2999 WorkCentre C2424, has features geared toward larger workgroups.

Perhaps the biggest compromise is in speed: The three color laser MFPs we tested printed monochrome text documents at an average of 9.6 pages per minute, and the one that was fastest at printing text—the Xerox WorkCentre C2424—printed at only 11.2 ppm. In February's *Top 10 Color Laser Printers* chart (see find.pcworld.com/47908), the average text speed of comparably priced stand-alone color laser printers was 17 ppm, nearly twice the MFPs' average. Overall, HP's Color LaserJet 2840 was the most sluggish of the seven MFPs we tested: It printed text documents at 7 ppm (interestingly, that's on a par with the speeds we noted on our June inkjet printers chart) and color graphics at 1.3 ppm.

Graphics print speeds were also significantly slower for these MFPs as a group: They turned in an average of 2.9 ppm compared with an average of 4.3 ppm for the stand-alone color lasers on our February chart. The Xerox proved the speediest, even beating the average page rate of our stand-alone models; at 5.5 ppm, it was over 4 ppm faster than the poky HP.

> The color laser MFPs proved slower at printing than their stand-alone cousins.

The Canon's print output quality was top-notch: Text looked sharp, and images displayed balanced colors. The MF8170C won't print on photo paper; but color images that we printed on plain paper appeared vibrant and smooth, with bright reds and blues and little pixelation.

In text quality, the HP Color LaserJet 2840 matched the color Canon's output. Printed grayscale graphics had a smooth texture and little banding, though our test pages came out a bit too dark. Its color graphics were mostly good, showing smooth transitions, attractive contrast, and generally realistic (though oversaturated) color. A print of our test image on photo paper looked vibrant, with some pixelation.

Unfortunately, the Xerox stumbled on print image quality. The unit's text looked thick, with slightly jagged edges, and narrow parallel lines merged into a mess of

TOP 100 TEST Center

Multifunction Laser Printers Get Color

FOR SMALL BUSINESSES needing low-volume color printing, the latest color laser MFPs offer flexibility at a low price.

	MONOCHROME	Features and specifications [1]		Performance	Bottom line
1	Brother MFC-8840DN Best BUY $490 (★★★★☆) find.pcworld.com/47B10	• Printing: 2400 by 600 dpi • Legal maximum paper size • Paper capacity: 300 sheets	• Scanning: 2400 by 600 dpi • Ethernet port • Built-in fax with 40 presets, AOF	• Text/grayscale graphics: Very Good/Good • Scan/copy quality: Very Good/Very Good • Print speed (ppm): 15.5 text, 7.0 graphics	The retested MFC-BB400N earns our nod for its high-quality text output, fast speed, and built-in duplexer.
2	Samsung SCX-4720F $500 (★★★★☆) find.pcworld.com/47B16	• Printing: 1200 by 1200 dpi • Legal maximum paper size • Paper capacity: 300 sheets	• Scanning: 600 by 600 dpi • Optional ethernet • Built-in fax with 40 presets, AOF	• Text/grayscale graphics: Very Good/Fair • Scan/copy quality: Fair/Good • Print speed (ppm): 16.3 text, 6.3 graphics	This MFP generated text swiftly and delivered crisp image quality. Can print directly from USB storage.
3	Canon ImageClass MF5750 $399 (★★★½☆) find.pcworld.com/47BB2	• Printing: 1200 by 600 dpi • Legal maximum paper size • Paper capacity: 250 sheets	• Scanning: 1200 by 2400 dpi • Optional ethernet • Built-in fax, AOF	• Text/grayscale graphics: Good/Fair • Scan/copy quality: Outstanding/Very Good • Print speed (ppm): 14.9 text, 7.9 graphics	This well-appointed, affordable MFP should be up to the task of handling most jobs in a small office.
4	HP Color LaserJet 3030 $500 (★★½☆☆) find.pcworld.com/47B12	• Printing: 1200 by 1200 dpi • Legal maximum paper size • Paper capacity: 150 sheets	• Scanning: 600 by 600 dpi • Optional ethernet • Built-in fax, AOF	• Text/grayscale graphics: Good/Poor • Scan/copy quality: Poor/Good • Print speed (ppm): 11.4 text, 3.4 graphics	The 3030's compact form is well suited for tight spaces, but you have faster and better-quality MFP choices.
	COLOR				
1	Canon ImageClass MF8170C Best BUY $999 (★★★★☆) find.pcworld.com/4787B	• Printing: 1200 by 600 dpi • Legal maximum paper size • Paper capacity: 375 sheets	• Scanning: 1200 by 2400 dpi • Ethernet port • Built-in fax, ADF	• Text/photo quality: Very Good/Very Good • Scan/copy quality: Outstanding/Very Good • Print speed (ppm): 10.6 text, 1.9 graphics	The MF8170C suits small offices that want a color laser with good image quality but don't need a speedy printer.
2	Xerox WorkCentre C2424 $2999 (★★★½☆) find.pcworld.com/47B17	• Printing: 600 by 600 dpi • Legal maximum paper size • Paper capacity: 625 sheets	• Scanning: 600 by 600 dpi • Ethernet port • AOF, no fax	• Text/photo quality: Fair/Fair • Scan/copy quality: Good/Fair • Print speed (ppm): 11.2 text, 5.5 graphics	Excellent features include a duplexer and easy network setup. But this MFP produced mediocre output.
3	HP Color LaserJet 2840 $999 (★★★☆☆) find.pcworld.com/47B14	• Printing: 1200 by 1200 dpi • Legal maximum paper size • Paper capacity: 375 sheets	• Scanning: 1200 by 1200 dpi • Media card slots, ethernet port • Built-in fax, ADF	• Text/photo quality: Very Good/Good • Scan/copy quality: Fair/Good • Print speed (ppm): 7.0 text, 1.3 graphics	This photo-friendly model lacks the speed and image quality needed to be a general office workhorse.

FOOTNOTE: [1] ADF = automatic document feeder. **HOW WE TEST:** Go to find.pcworld.com/43B54 for a details of our test methodology. Data based on tests designed and conducted by the PC World Test Center. All rights reserved. **CHART NOTES:** All models ranked on the chart this month are new except the Brother MFC-B840DN, which has been retested. For printing we list maximum enhanced resolution; for scanning we list maximum optical resolution. Photos are printed at best-quality settings; optional photo paper is used where offered. All units have flatbed scanners and a USB 2.0 port. Prices given are street prices as of 4/22/05. Star ratings are based on print quality, features, ease of use, speed, and service and support policies. Prices are taken into consideration for Editor's Pick honors only. See find.pcworld.com/10860 for details on *PC World's* Star Ratings. Visit find.pcworld.com/4B002 for reviews of all products ranked in this chart.

overlapping light and dark sections. Though our grayscale image had fairly good contrast, it was very grainy. Color graphics were muted and off-kilter; people had slightly orange skin tones, as if they were suffering from heat exhaustion.

The color laser MFPs printed slowly, but they scanned fairly speedily: The average time the three units took to scan a color document was 27 seconds, versus an average of 43 seconds for a range of similarly priced stand-alone models from our March *Top 10 Scanners* chart (find.pcworld.com/47909). Unfortunately, you probably won't like what you see. Our test color scans often came out garish, fuzzy, and pixelated; and they lacked the sharpness and color accuracy possible from a single-function scanner. Only Canon's MF8170C did moderately well: Its scans, whether printed or viewed on screen, reproduced color and detail nicely, showing good skin tones and accurate lines.

The copy speeds of the color MFPs we tested were just a second or two apart. But their image quality varied greatly, from the Canon's deft text reproduction to the Xerox's too-light duplication.

HP provides several photo-specific features, including integrated media card slots and the company's HP Image Zone organizing and editing software. In addition, you can mark a proof sheet with the photos you want to print; after it has rescanned the proof sheet, the 2840 will print the photos you've chosen.

The Xerox model faltered on imaging tests, but it excels at networking (see the sidebar). This model is clearly designed for heavy workflow, with an abundance of paper-handling options and extra trays (to expand capacity by more than 2.5 times).

READY, SET, MFP

THOUGH MFP LASERS still have some weaknesses, the performance gap between them and stand-alone laser printers has narrowed. The Brother MFC-8840DN remains one of the faster MFPs around, and it gave us consistently good image quality. With an automatic duplexer and standard networkability for $490, the MFC-8840DN makes a great choice for a small office or workgroup.

For now, color laser MFPs and color laser printers have the most noticeable performance difference. Depending on your needs, however, the benefits of a color MFP may outweigh the sacrifices you make. Of the three units we tested, the Canon ImageClass MF8170C had the best balance of price and performance. It was faster than the HP Color LaserJet 2840 and delivered better print and scan quality than both the HP and the Xerox. ■

—*Lisa Cekan*

NETWORKED MFPs

Navigating the Networking Maze

IN ADDITION TO THEIR standard repertoire of scan, copy, print, and fax, many of today's laser MFPs can connect to a network and handle network scanning and faxing. The additional tools you can access may depend not only on the MFP you have, but on how you configure it on the network.

There are two ways to set up an MFP on a network. The first involves installing the drivers on a server, after which each client machine finds the print and fax drivers on the server and sends jobs through them.

The main advantage of this configuration is that the network manager retains control over the print properties and settings for the printer and for all clients that use it. Also, a print queue on the server manages print jobs, so the printer doesn't get overloaded with jobs sent simultaneously from multiple clients. Typically, though, under this method you lose the ability to use the MFP's scanner and fax capabilities.

The second method for connecting an MFP is via peer-to-peer networking. In this scenario you install the software and drivers on each client individually. Often, as in the case of the Brother MFC-8840DN and the HP Color LaserJet 2840, a network installation option loads all of the drivers and software necessary for the MFP's functions on each PC on the network.

The peer-to-peer approach is well suited for small workgroups. It lets you use the unit to scan a document to a folder on the network; but it also means that the network manager must install the software on each workstation (or put the drivers on the network for others to access), and individual users retain more control over the printer's settings. And with no print server, you may also run into problems if too many users try to print at one time.

Be sure you understand the networking capabilities of a prospective MFP before you buy. For example, you can connect the Canon ImageClass MF8170C to a network only in a server-client configuration; and if you install the Brother, the Canon, or the HP in a server-client environment, you lose the networked scanning function.

In contrast, Xerox's WorkCentre C2424 has a best-of-both-worlds networking option. I installed the print drivers on *PC World's* test server running Windows Server 2003; then, at each client station I installed all of the software and drivers via the printer's embedded Web server—a convenience that eliminates the need either to put the drivers on the network or to carry an installation disk to each client PC.

XEROX'S WORKCENTRE C2424 offers robust, easy-to-configure networking.

The remaining MFPs (all monochrome) in this roundup offer external ethernet options, ranging in price from $200 to $300; all but the Samsung limit you to using only the printer component via the network.

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IN THE CHARTS

EDITED BY THE REVIEWS STAFF

Xi Computer's MTower SP Sets New WorldBench 5 Mark

THE FOUR NEW systems on our desktop PCs chart range from a high-end WorldBench 5 record-setter to a pair of relatively inexpensive Media Center machines from Sony.

Xi Computer's MTower SP arrives at the top of the power section with a WorldBench 5 score of 125, finishing just ahead of May's ABS Ultimate M6, which scored 122. The MTower SP leads the group with 600GB of drive space in a striped RAID configuration. It's a roomy and well-designed machine ideal for gaming or other high-performance tasks.

If you'd like to explore entertainment on your PC but want the process to be as simple as using your DVD player, give Sony's VAIO VGC-RA830G a try. This machine comes with all the hardware and software you need to get started, including Windows Media Center.

Failing to make the power list this month is Shuttle's new XPC P2500G, which performed sluggishly despite having a top-tier $3750 price. The $780 EMachines T6212 minitower PC narrowly missed the value rankings. It includes a double-layer DVD±RW drive, but landed below the cut due in part to an unimpressive 15-inch LCD monitor. We also examined the svelte Amax V4550+, which costs $1499 but was a slow performer.

NOTEBOOKS

IBM LAPTOPS MAKE a splash on this month's chart with two winning upgrades: the ThinkPad T43, which earns the desktop replacement Best Buy, and the ThinkPad R52, which succeeds the R51 in the all-purpose notebook section.

A fingerprint reader in the T43's palm rest permits you to replace passwords with a swipe of a finger. Both the T43 and the more mainstream R52—a thicker portable with most of the same features—offer an ExpressCard slot and a slightly improved keyboard.

Just missing the chart was the Toshiba Tecra M3, a lightweight but tricky-to-upgrade unit that is limited to a DVD-ROM/CD-RW combination drive. Toshiba's Satellite M45-S351 impressed us with good sound and dedicated CD music controls, but it offered only 3 hours of battery life.

TECH TREND

PC Cards Get a Downsized Makeover

THE CREDIT CARD-LIKE format of today's PC Cards is giving way to a smaller and faster-operating format, ExpressCard. All ExpressCard modules are nearly 3 inches long, but the ExpressCard/34 is only 1.33 inches (34 millimeters) wide, whereas the ExpressCard/54 is slightly over 2 inches (54mm) wide. Both types have the same connector, which, however, is incompatible with the connector on today's CardBus modules.

ExpressCards interface with either today's USB 2.0 or PCI Express buses. With PCI Express, you can move data at up to 250 megabytes per second, while the CardBus slots top out at about 133 MBps.

Some laptops now ship with ExpressCard slots; ExpressCard peripherals should start to appear later this year (see find.pcworld.com/48048).

THE EXPRESS LANE: New PC Cards such as these from AboCom and AVerMedia, will replace their CardBus siblings.

PHOTOGRAPH: MARC SIMON

INSIDE INFO

Graphics Boards

NEW RADEON X850 boards from MSI and Asus dominate the power section of the chart, with two NVidia 6800 GT-based boards following close behind. Meanwhile, GeForce 6600-based cards from BFG, EVGA, and MSI top the value section. EVGA's GeForce 6200 board just squeaks in.

More on the Web

PC WORLD uses its industry-standard benchmarking application, WorldBench 5, to evaluate the performance of desktop PCs, notebooks, and tablet PCs. We run a number of real-world applications performing real-world computing tasks. For more information on the WorldBench 5 tool, visit find.pcworld.com/44262. Go to find.pcworld.com/10860 for more details about *PC World*'s Star Ratings.

The Top 100 Team

FREELANCE WRITERS Rebecca Freed and Richard Jantz, Contributing Editor Carla Thornton, and *PC World* editors Yardena Arar, Laura Blackwell, Eric Butterfield, Tracey Capen, Kalpana Ettenson, Melissa J. Perenson, Narasu Rebbapragada, Dan Sommer, and Alan Stafford contributed to the *Top 100* section this month. Ulrike Diehlmann, Julio Giannobile, Elliott Kirschling, Jeff Kuta, Tony K. Leung, Thomas Luong, and William Wang of the PC World Test Center tested the products reviewed in this issue.

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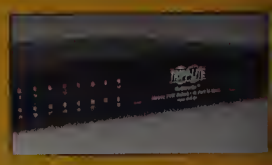

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TOP 15 DESKTOP PCs

★ Products in this chart are ordered by star rating. Visit find.pcworld.com/47902 for reviews of all products tested this month and ranked in this chart.

	POWER SYSTEM	Features and specifications [1]		Performance	Bottom line
1	Xi Computer MTower SP $3799 (★★★★½ NEW) find.pcworld.com/47900	• 2.6-GHz Athlon 64 FX-55 • 600GB drive space (RAID) • Double-layer DVD±RW drive	• 19-inch ViewSonic LCD monitor • 256MB EVGA E-GeForce 6800 Ultra graphics • Logitech X-620 speakers	• WorldBench 5 score: 125 • Graphics: Outstanding • Design: Good	Gaming system turns in highest-ever WorldBench 5 score. With 600GB of storage, it's worth the steep cost.
2	Alienware Aurora 64 5500 Best BUY $3500 (★★★★½ Feb 05) find.pcworld.com/45562	• 2.6-GHz Athlon 64 FX-55 • 320GB drive space (RAID) • DVD±RW, DVD-ROM drives	• 19-inch NEC LCD monitor • 256MB ATI Radeon X800 Pro graphics • Logitech X-530 speakers	• WorldBench 5 score: 110 • Graphics: Outstanding • Design: Outstanding	Strong performance keeps this well-equipped, nicely priced gaming PC near the top of the chart.
3	ABS Ultimate M5-64 $3799 (★★★★½ Feb 05) find.pcworld.com/45558	• 2.6-GHz Athlon 64 FX-55 • 340GB drive space (RAID) • DVD±RW, DVD-ROM drives	• 19-inch Samsung LCD monitor • 256MB EVGA E-GeForce 6800 Ultra graphics • Logitech Z-680 speakers	• WorldBench 5 score: 107 • Graphics: Outstanding • Design: Very Good	Feature-rich system comes with an industrial-strength metal case and a liquid-cooled CPU.
4	Polywell Poly 939N-FX55 $2950 (★★★★½ Apr 05) find.pcworld.com/46714	• 2.6-GHz Athlon 64 FX-55 • 149GB drive space (RAID) • DVD±RW, CD-RW drives	• 19-inch ViewSonic CRT monitor • 256MB NVidia GeForce 6800 Ultra graphics • Creative T7700 7.1 speakers	• WorldBench 5 score: 113 • Graphics: Outstanding • Design: Good	Elegant-looking black-and-silver unit has top-notch performance; CRT monitor keeps the cost down.
5	ABS Ultimate M6 $3699 (★★★★☆ May 05) find.pcworld.com/46942	• 2.6-GHz Athlon 64 FX-55 • 320GB drive space (RAID) • DVD±RW, DVD-ROM drives	• 19-inch Samsung CRT monitor • 256MB ATI Radeon X850 XT graphics • Logitech Z-5500 speakers	• WorldBench 5 score: 122 • Graphics: Outstanding • Design: Very Good	Massive yet stylish gaming PC earned our second-best WorldBench 5 score. Comes in matte-silver case.
6	Gateway 9310XL $2319 (★★★★☆ NEW) find.pcworld.com/47896	• 3.4-GHz Pentium 4 550 • 500GB drive space • DVD±RW, DVD-ROM/CD-RW drives	• 17-inch Gateway LCD monitor • 256MB ATI Radeon X800 Pro graphics • Gateway GMAX5100 speakers	• WorldBench 5 score: 93 • Graphics: Very Good • Design: Good	Lots of storage, a dual-layer optical writer, and a low price offset this PC's relatively slow performance.
7	Sony VAIO VGC-RA830G $2200 (★★★★☆ NEW) find.pcworld.com/47B74	• 3.4-GHz Pentium 4 550 • 320GB drive space (RAID) • DVD±RW, DVD-ROM/CD-RW drives	• 19-inch Sony LCD monitor • 256MB Asus EAX300LE graphics • Logitech X-530 speakers	• WorldBench 5 score: 91 • Graphics: Very Good • Design: Good	Sony's inexpensive unit with Windows XP Media Center will fit effortlessly in the living room.
	VALUE SYSTEM				
1	IBM ThinkCentre A51p $1627 (★★★★☆ Feb 05) find.pcworld.com/45626	• 3-GHz Pentium 4 530 • 160GB drive space • DVD-ROM, CD-RW drives	• 17-inch ThinkVision LCD monitor • 64MB ATI Radeon X300 Pro graphics • Cyber Acoustics CA-3090 speakers	• WorldBench 5 score: 83 • Graphics: Very Good • Design: Good	Tool-less design and advanced security features distinguish this good-looking, all-business black tower.
2	Shuttle Computer XPC i8600b $1611 (★★★★½ June 05) find.pcworld.com/47600	• 3-GHz Pentium 4 530 • 320GB drive space • DVD-ROM/CD-RW combo drive	• 17-inch Shuttle LCD monitor • Integrated Intel 915G graphics • Eight-in-one media-card reader	• WorldBench 5 score: 82 • Graphics: Good • Design: Very Good	Packed with almost everything a larger unit offers, this PC provides strong value and performance.
3	Amax Kloss i915B $1469 (★★★★☆ Feb 05) find.pcworld.com/45620	• 2.8-GHz Pentium 4 520 • 120GB drive space • DVD-ROM/CD-RW combo drive	• 17-inch AG Neovo LCD monitor • 128MB NVidia GeForce PCX 5750 graphics • AOpen SoundSphere 2.1 speakers	• WorldBench 5 score: 83 • Graphics: Very Good • Design: Good	Shoe-box system with excellent design will look terrific in any setting; see-through speakers match well.
4	Velocity Micro ProMagix PCX $1647 (★★★½☆ Mar 05) find.pcworld.com/46276	• 3.4-GHz Pentium 4 550 • 200GB drive space • DVD±RW, DVD-ROM/CD-RW drives	• 19-inch CTX CRT monitor • 128MB EVGA E-GeForce 6600 graphics • Creative Inspire P5800 speakers	• WorldBench 5 score: 94 • Graphics: Very Good • Design: Very Good	Fast PC is very expandable; all-black aluminum case is attractive. But at this price, you deserve an LCD.
5	CyberPower Gamer Ultra 7500 Elite Best BUY $999 (★★★½☆ Feb 05) find.pcworld.com/45622	• 2.2-GHz Athlon 64 3200+ • 120GB drive space • DVD±RW drive	• 17-inch AOpen LCD monitor • 256MB NVidia GeForce FX 5700LE graphics • Creative SBS 5.1 560 speakers	• WorldBench 5 score: 91 • Graphics: Very Good • Design: Good	Funky-looking system includes top-mounted USB and audio ports, and a pop-up status panel.
6	Sony VAIO VGC-RB38G $1700 (★★★½☆ NEW) find.pcworld.com/47B76	• 3.4-GHz Pentium 4 550 • 250GB drive space • DVD±RW, DVD-ROM/CD-RW drives	• 17-inch Sony LCD monitor • 128MB Asus EAX300LE graphics • Sony VGP-SP3 speakers	• WorldBench 5 score: 92 • Graphics: Very Good • Design: Fair	Media Center PC for the price-conscious suits modest entertainment needs. Double-layer DVD writer.
7	Gateway Profile 5.5C $1885 (★★★½☆ June 05) find.pcworld.com/47602	• 3.2-GHz Pentium 4 540 • 160GB drive space • DVD±RW drive	• 17-inch Gateway LCD monitor • Integrated ATI Radeon X300 LE graphics • Speakers built into monitor	• WorldBench 5 score: 84 • Graphics: Very Good • Design: Very Good	Gateway's innovative all-in-one design offers stability and makes the ports and drive easy to reach.
8	Polywell Poly Mini-Box 939AX-3200 $1250 (★★★½☆ Apr 05) find.pcworld.com/46718	• 2.2-GHz Athlon 64 3200+ • 200GB drive space • DVD±RW drive	• 17-inch Hyundai LCD monitor • Integrated ATI Radeon Xpress X200 • Creative 5.1 T5400 speakers	• WorldBench 5 score: 85 • Graphics: Fair • Design: Very Good	Stylish black Media Center entertainment model fits easily into tight quarters, but upgrades are limited.

FOOTNOTE: [1]Features listings are not exhaustive; hard-drive capacity may represent multiple drives. **CHART NOTES:** Street prices are as of 4/15/05. See find.pcworld.com/10860 for details on *PC World's* Star Ratings. Price is taken into consideration for Best Buy honors only. All tests designed and conducted by the PC World Test Center. All rights reserved.

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TOP 100 TEST Center

TOP 15 NOTEBOOK PCs

★ Products in this chart are ordered by star rating. Visit find.pcworld.com/47912 for reviews of all products tested this month and ranked in this chart.

	DESKTOP REPLACEMENT	Features and specifications [1]		Performance	Bottom line
1	IBM ThinkPad T43 Best BUY $2049 (★★★★☆ NEW) find.pcworld.com/47826	• 1.86-GHz Pentium M 750 • 14.1-inch screen • 6.4 pounds	• DVD±RW/-RAM drive • Touchpad and eraserhead pointing devices • 802.11g, gigabit ethernet, fingerprint reader	• World8ench 5 score: 84 • Overall design: Very Good • Tested battery life: 5:02	This slim unit updates the ThinkPad T line of corporate notebooks and has a biometric fingerprint reader.
2	Dell Inspiron 6000 $2271 (★★★★☆ May 05) find.pcworld.com/47230	• 2-GHz Pentium M 760 • 15.4-inch wide screen • 8.4 pounds	• DVD±RW drive • Touchpad pointing device • 802.11a/g, SD Card slot, WordPerfect Office 12	• World8ench 5 score: 89 • Overall design: Good • Tested battery life: 5:07	Big laptop has strong performance and a high native resolution of 1900 by 1200, plus great speakers.
3	HP Pavilion Dv4000 $1189 (★★★★½ NEW) find.pcworld.com/47827	• 1.86-GHz Pentium M 745 • 15.4-inch wide screen • 7.6 pounds	• Double-layer DVD±RW drive • Touchpad pointing device • 802.11g, ExpressCard slot, Microsoft Works 8	• World8ench 5 score: 77 • Overall design: Good • Tested battery life: 3:23	Elegant wide screen features a new ExpressCard slot and also includes a six-in-one media card reader.
4	HP Compaq Nx9600 $2229 (★★★½☆ June 05) find.pcworld.com/47498	• 3.6-GHz Pentium 4 560 • 17.0-inch wide screen • 12.1 pounds	• DVD+RW drive • Touchpad pointing device • 802.11g, ExpressCard slot, docking station	• World8ench 5 score: 85 • Overall design: Very Good • Tested battery life: 1:20	Big-screen laptop produces great sound, but it's extremely heavy and offers poor battery life.
5	Fujitsu LifeBook N6010 $2399 (★★★½☆ May 05) find.pcworld.com/47234	• 3.2-GHz Mobile Pentium 4 538 • 17.0-inch wide screen • 12.2 pounds	• DVD-RW drive • Touchpad pointing device • 802.11g, two-in-one media card reader	• World8ench 5 score: 81 • Overall design: Very Good • Tested battery life: 1:57	Large entertainment unit with built-in TV tuner has the equipment and screen space for work and play.
6	Gateway M460X $2019 (★★★☆☆ May 05) find.pcworld.com/47236	• 2.13-GHz Pentium M 770 • 15.4-inch wide screen • 8.0 pounds	• DVD-RW drive • Touchpad and eraserhead pointing devices • 802.11g, four-in-one media card reader	• WorldBench 5 score: 87 • Overall design: Good • Tested battery life: 3:23	Slim laptop has four USB ports, all on the right side, but its pointing stick suffers from an erratic cursor.
	ALL-PURPOSE NOTEBOOK				
1	HP Compaq Nc8230 $2179 (★★★★½ May 05) find.pcworld.com/47228	• 2-GHz Pentium M 760 • 15.4-inch wide screen • 7.3 pounds	• DVD-ROM and CD-RW combo drive • Touchpad and eraserhead pointing devices • 802.11g, Bluetooth, SD Card slot	• World8ench 5 score: 85 • Overall design: Good • Tested battery life: 5:11	Classy-looking model has a quick-launch presentation button and a superhigh-resolution screen.
2	Compaq Presario V2000 Best BUY $1298 (★★★★½ May 05) find.pcworld.com/47226	• 1.8-GHz Pentium M 745 • 14.1-inch wide screen • 7.0 pounds	• DVD-RW drive • Touchpad pointing device • 802.11g, six-in-one media card reader	• World8ench 5 score: 75 • Overall design: Good • Tested battery life: 5:48	This sleek unit has it all: good sound and keyboard, great battery life, and a vivid, readable BrightView screen.
3	IBM ThinkPad R52 $1749 (★★★★☆ NEW) find.pcworld.com/47828	• 1.73-GHz Pentium M 740 • 14.1-inch screen • 7.0 pounds	• DVD-ROM and CD-RW combo drive • Touchpad and eraserhead pointing devices • 802.11g, Bluetooth, gigabit ethernet	• WorldBench 5 score: 77 • Overall design: Outstanding • Tested battery life: 3:30	This model's fine keyboard has dual pointing devices, and its modular bay accepts many optional drives.
4	Micro Express CL5620 $1599 (★★★½☆ Mar 05) find.pcworld.com/46172	• 2-GHz Pentium M 755 • 15.0-inch screen • 7.2 pounds	• DVD±RW drive • Touchpad pointing device • 802.11g, SD Card slot	• World8ench 5 score: 97 • Overall design: Fair • Tested battery life: 3:56	Elegant-looking notebook sports a beautiful high-resolution screen and an ultrafirm keyboard.
5	Toshiba Satellite R15-S822 $1599 (★★★½☆ NEW) find.pcworld.com/47829	• 1.6-GHz Pentium M 725 • 14.1-inch screen • 7.0 pounds	• DVD-ROM and CD-RW combo drive • Touchpad pointing device • 802.11g, SD Card slot	• World8ench 5 score: 69 • Overall design: Good • Tested battery life: 5:18	Convertible tablet is a bit heavy to carry around easily, but its 14.1-inch screen offers lots of room to write.
6	WinBook W364 $1799 (★★★☆☆ June 05) find.pcworld.com/47496	• 2-GHz Pentium M 755 • 15.4-inch wide screen • 7.2 pounds	• Double-layer DVD±RW drive • Touchpad pointing device • 802.11g, three-in-one media card reader	• World8ench 5 score: 86 • Overall design: Good • Tested battery life: 2:29	Handsome silver laptop is easy to use and has a convenient memory card reader on the front.
	ULTRAPORTABLE				
1	Dell Inspiron 700m Best BUY $1617 (★★★★☆ Dec 04) find.pcworld.com/44246	• 1.8-GHz Pentium M 745 • 12.1-inch wide screen • 4.8 pounds	• DVD+RW drive • Touchpad pointing device • 802.11g, SD Card slot	• WorldBench 5 score: 80 • Overall design: Good • Tested battery life: 2:45	Strongly built laptop offers a wide-aspect screen but has a particularly cramped keyboard.
2	IBM ThinkPad X40 $2299 (★★★★☆ Sept 04) find.pcworld.com/43066	• 1.2-GHz LV Pentium M • 12.1-inch screen • 5.6 pounds	• DVD-ROM and CD-RW combo drive [2] • Eraserhead pointing device • 802.11g, Bluetooth, gigabit ethernet	• World8ench 5 score: 55 • Overall design: Good • Tested battery life: 2:36	This ThinkPad boasts the finest keyboard for its size. The optical drives are USB- or dock-based only.
3	WinBook X540 $1599 (★★★☆☆ Mar 05) find.pcworld.com/46174	• 2-GHz Pentium M 755 • 12.1-inch screen • 5.5 pounds	• Double-layer DVD±RW drive • Touchpad pointing device • 802.11g, three-in-one media card reader	• World8ench 5 score: 83 • Overall design: Good • Tested battery life: 3:03	You can watch DVD movies, home videos, and slide shows without turning this lightweight laptop on.

FOOTNOTES: [1] Features listings are not exhaustive. [2] Optical drive housed in docking station. **CHART NOTES:** Street prices are as of 4/18/05. Weight includes AC adapter, power cord, and optical drive. Optical drives are removable unless otherwise noted. Price is taken into consideration for Best Buy honors only. All tests designed and conducted by the PC World Test Center. All rights reserved. See find.pcworld.com/1D860 for details on *PC World*'s Star Ratings.

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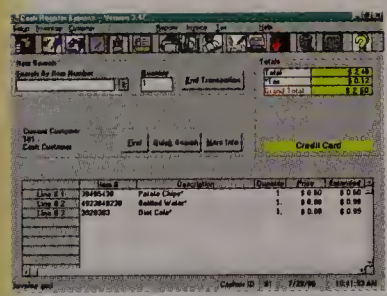

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TOP 10 MONITORS

★ Products in this chart are ordered by star rating. Visit find.pcworld.com/47860 for reviews of all products tested this month and ranked in this chart.

SPLITTING OUR USUAL *Top 10 Monitors* chart to cover 23- and 24-inch LCDs as well as 19-inch LCDs, we bring you the best of both worlds. In the 19-inch category, Sony's glossy-screened SDM-HS95P shows crisp details and rich colors, making it the only model recently rated Outstanding for both text and graphics quality. HP's F1905, easily the company's best 19-inch LCD model to date, displayed clean text second only to that of the Sony. BenQ's FP91V+, which uses a glossy screen similar to the Sony's, came in second in graphics and third in overall image quality; but skimpy tech-support hours keep it off the chart. Meanwhile, two analog-only models, IBM's ThinkVision L190 and Samsung's SyncMaster 915n, miss the chart due to their dearth of features.

SONY'S 19-INCH SDM-HS95P is tops.

The largest wide-screen LCDs we tested have the same native resolution, so we pitted 23- and 24-inch units against one another. Samsung's SyncMaster 243t, our Editor's Pick in the November 2004 Spotlight, rises to the top again with clear text, nicely saturated colors, and great detail. But bigger isn't always better: In our text and graphics tests, Dell's 24-inch UltraSharp 2405FPW finished just behind the 23-inch ViewSonic VP231wb.

	19-INCH LCD	Features and specifications[1]		Performance	Bottom line
1	Sony SDM-HS95P $700 (★★★★☆ NEW) find.pcworld.com/47845	• Inputs: one analog, one digital • Adjustments: tilt	• 12ms response time • 13.2 pounds	• Text quality: Outstanding • Graphics quality: Outstanding • Usability: Outstanding	Glossy screen shows rich colors and crisp text, handily beating all other monitors on graphics tests and edging out the competition on text.
2	Eizo FlexScan L768 $790 (★★★★☆ Jan 05) find.pcworld.com/45206	• Inputs: one analog, one digital • Adjustments: tilt, swivel, pivot, and height	• 25ms response time • 15.0 pounds	• Text quality: Very Good • Graphics quality: Good • Usability: Very Good	Advanced screen settings and five fine-contrast modes make this a display for the demanding user—but the price is pretty demanding, too.
3	Samsung SyncMaster 920t $649 (★★★★☆ Apr 05) find.pcworld.com/46538	• Inputs: one analog, one digital • Adjustments: tilt, swivel, pivot, and height	• 25ms response time • 15.4 pounds	• Text quality: Very Good • Graphics quality: Good • Usability: Very Good	Sleek silver model has speakers built into the two-footed stand, conserving space without sacrificing physical adjustability.
4	HP F1905 $480 (★★★★☆ NEW) find.pcworld.com/47846	• Inputs: one analog, one digital • Adjustments: tilt and height	• 16ms response time • 15.4 pounds	• Text quality: Outstanding • Graphics quality: Very Good • Usability: Good	Matte-silver unit delivers the second-best overall image quality on the chart. Detached 3-watt speakers can connect to an optional subwoofer.
5	Dell UltraSharp 1905FP Best BUY $529 (★★★★☆ Jan 05) find.pcworld.com/45204	• Inputs: one analog, one digital • Adjustments: tilt, swivel, pivot, and height	• 20ms response time • 15.3 pounds • Three-port USB 2.0 hub	• Text quality: Very Good • Graphics quality: Good • Usability: Very Good	Three USB 2.0 ports and a full range of physical adjustments make this nicely designed thin-bezel monitor a pleasure to use.
6	LG Electronics Flatron L1981Q $499 (★★★★☆ NEW) find.pcworld.com/47850	• Inputs: one analog, one digital • Adjustments: tilt, pivot, and height	• 8ms response time • 12.3 pounds	• Text quality: Very Good • Graphics quality: Good • Usability: Very Good	Like the earlier L1980U, this stylish unit employs heat-sensitive buttons and innovative automatic pivoting software; it also has a smooth bezel.
7	ViewSonic VP191b $469 (★★★½☆ RETESTED) find.pcworld.com/47848	• Inputs: two analog, one digital • Adjustments: tilt, swivel, pivot, and height	• 8ms response time • 20.9 pounds • Four-port USB 2.0 hub	• Text quality: Very Good • Graphics quality: Good • Usability: Very Good	Pivot software and USB ports enhance this nicely priced unit. Its image quality, though not the best, is sufficient for most office tasks.
	23- OR 24-INCH LCD				
1	Samsung SyncMaster 243t $1699 (★★★★☆ RETESTED) find.pcworld.com/44040	• Inputs: one analog, one digital • Adjustments: tilt, swivel, pivot, and height	• 25ms response time • 21.0 pounds	• Text quality: Very Good • Graphics quality: Outstanding • Usability: Good	For quality of still images, this 24-incher remains the champ. An all-work-no-play wide screen, it shows motion artifacts in games and DVD movies.
2	ViewSonic VP231wb $1749 (★★★★☆ NEW) find.pcworld.com/47562	• Inputs: one analog, one digital • Adjustments: tilt, swivel, pivot, and height	• 12ms response time • 19.8 pounds • Four-port USB 2.0 hub	• Text quality: Very Good • Graphics quality: Very Good • Usability: Very Good	Professional-looking 23-inch unit led the large wide screens in our photo tests; it comes with pivoting software for viewing in portrait mode.
3	Dell UltraSharp 2405FPW Best BUY $1199 (★★★★☆ NEW) find.pcworld.com/47564	• Inputs: one analog, one digital, component, composite, S-Video • Adjustments: tilt, swivel, and height	• 12ms response time • 22.1 pounds • Four-port USB 2.0 hub	• Text quality: Very Good • Graphics quality: Very Good • Usability: Very Good	Well-designed 24-inch model includes accessible nine-in-one media card reader, at the lowest price we've seen on a large wide-screen LCD.

FOOTNOTE: [1] Digital inputs require a graphics card with a DVI digital output, which we use to test all monitors that offer DVI. Unless otherwise specified, "analog" refers to 15-pin analog and "digital" refers to DVI. **HOW WE TEST:** Judges rate how well each monitor displays 11 text and graphics images at native resolution. For 19-inch monitors, native resolution is 1280 by 1024; for 23- and 24-inch wide-screen monitors, native resolution is 1920 by 1200. Some screens are from DisplayMate for Windows (www.displaymate.com). See find.pcworld.com/34613 for testing details. Data based on tests designed and conducted by the PC World Test Center. All rights reserved. **CHART NOTES:** Prices given are street prices as of 4/22/05. Star ratings are based on text quality, graphics quality, features, ease of use, and service and support. Price is taken into consideration for Best Buy honors only. See find.pcworld.com/10860 for more on *PC World*'s Star Ratings.

PHOTOGRAPH: MARC SIMON

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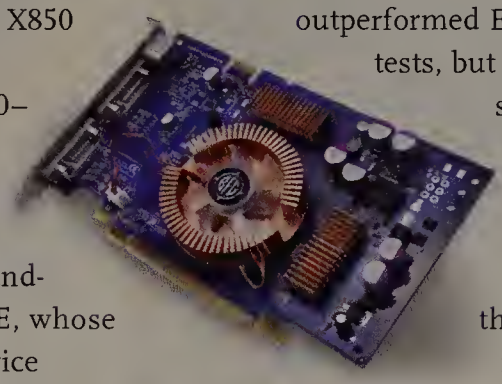
TOP 10 GRAPHICS BOARDS

★ Products in this chart are ordered by star rating. Visit find.pcworld.com/47904 for reviews of all products tested this month and ranked in this chart.

SINCE JANUARY, WHEN WE published our last chart, graphics board manufacturers have released a healthy selection of units for the PCI Express interface. These models' chip sets range from ATI's top-of-the-line Radeon X850 to NVidia's value-priced GeForce 6200.

On the power side, Radeon X850–equipped boards proved faster than NVidia's pro-level 6800GT-equipped boards in most frame-rate tests. Asus's Extreme AX850XT/2DHTV ran neck-and-neck with MSI's RX850XT-VT2D256E, whose superior software bundle and lower price earned it our top ranking.



BFG'S GeForce 6600 GT OC.

NVidia GeForce 6600 GT boards dominate the value section and should provide satisfying game play in many situations. BFG's top-ranked, overclocked GeForce 6600 GT OC outperformed EVGA's E-GeForce 6600GT by just a bit in tests, but the cards' real-world game play should be similar. MSI's Radeon X600XT–equipped RX600XT-VDT128E edged past EVGA's bargain-priced ($140) E-GeForce 6200 board, which squeezed into fifth place. The 6200 has twice the RAM of the four higher-ranking value models this month, proving that more memory doesn't guarantee better performance.

	PCI EXPRESS POWER BOARD	Features and specifications		Performance[1]	Bottom line
1	MSI RX850XT-VT2D256E $510 (★★★★½ NEW) find.pcworld.com/47867	• ATI Radeon X850 XT graphics chip • 256M8 DDR3 SDRAM	• Ports: Two DVI-out, S-Video- and composite-in/out, component-out • Utility and DVD apps, three games	• Doom 3: 48 fps • Far Cry: 61 fps • Halo: 81 fps	Matches the second-ranked Asus in speed and features, but has a lower price and a better game software bundle.
2	Asus Extreme AX850XT/2DHTV $637 (★★★★½ NEW) find.pcworld.com/47864	• ATI Radeon X850 XT graphics chip • 256M8 DDR3 SDRAM	• Ports: Two DVI-out, S-Video- and composite-in/out, component-out • Video editing and DVD apps, two games	• Doom 3: 47 fps • Far Cry: 61 fps • Halo: 80 fps	Like the MSI, the Asus Extreme is quick and has good features; package comes with Power Director 3 video editing suite.
3	PowerColor X800 XT VIVO $500 (★★★★☆ Jan 05) find.pcworld.com/45282	• ATI Radeon X800 XT graphics chip • 256MB GDDR3 SDRAM	• Ports: DVI-out, 15-pin VGA-out, S-Video- and composite-in/out, component-out • DVD suite, two games	• Doom 3: 42 fps • Far Cry: 55 fps • Halo: 77 fps	Doesn't quite match the Radeon X850-equipped boards' speed, but multimedia fans might prefer its DVD software bundle.
4	PNY Verto GeForce 6800 GT $399 (★★★½☆ RETESTED) find.pcworld.com/47866	• NVidia GeForce 6800GT graphics chip • 256M8 DDR3 SDRAM	• Ports: Two DVI-out, S-Video-out • Calibration utility	• Doom 3: 50 fps • Far Cry: 58 fps • Halo: 75 fps	One of the chart's fastest, this board is well priced, but it has fewer ports than the competition and less bundled software.
5	Aopen Aeolus 6800GT-DV256 Best BUY $399 (★★★½☆ NEW) find.pcworld.com/47868	• NVidia GeForce 6800GT graphics chip • 256M8 DDR3 SDRAM	• Ports: Two DVI-out, S-Video- and composite-out • Two games and five game demos	• Doom 3: 50 fps • Far Cry: 57 fps • Halo: 75 fps	An attractive balance of price, ports, and performance helps make this board a good value. It rocked our Doom 3 game tests.
	PCI EXPRESS VALUE BOARD				
1	BFG Technologies GeForce 6600 GT OC Best BUY $250 (★★★★☆ NEW) find.pcworld.com/47865	• NVidia GeForce 6600 GT graphics chip • 128M8 GDDR3 SDRAM	• Ports: Two DVI-out, S-video-out, composite-out, component-out • Nvidia multimedia apps; game demos	• Doom 3: 37 fps • Far Cry: 43 fps • Halo: 63 fps	Overclocking yields a performance edge over other ranked GeForce 6600 boards; more output ports than usual, too.
2	EVGA E-GeForce 6600GT $215 (★★★★☆ Jan 05) find.pcworld.com/45268	• NVidia GeForce 6600 GT graphics chip • 128MB DDR3 SDRAM	• Ports: DVI-out, 15-pin VGA-out, S-Video-out • 30-day trials of multimedia apps	• Doom 3: 34 fps • Far Cry: 40 fps • Halo: 59 fps	If you have no interest in a software bundle, this board is a better value than the top-ranked 8FG and is nearly as fast.
3	MSI NX6600GT-TD128E $189 (★★★★☆ NEW) find.pcworld.com/47871	• NVidia GeForce 6600 GT graphics chip • 128M8 DDR3 SDRAM	• Ports: DVI-out, 15-pin VGA-out, S-Video- and component-out • Photo and multimedia apps, three games	• Doom 3: 36 fps • Far Cry: 41 fps • Halo: 60 fps	A stellar software bundle and respectable performance, but drivers proved difficult to find on our test unit's installation CD.
4	MSI RX600XT-VTD128E $140 (★★½☆☆ Jan 05) find.pcworld.com/45274	• ATI Radeon X600 XT graphics chip • 128M8 DDR SDRAM	• Ports: DVI-out, 15-pin VGA-out, S-Video- and composite-in/out, component-out • Utility and DVD apps; three games	• Doom 3: 12 fps • Far Cry: 15 fps • Halo: 27 fps	Not our choice for 3D gaming; but the relatively low price makes it suitable for basic video, and it has an ample software bundle.
5	EVGA E-GeForce 6200 $140 (★★½☆☆ NEW) find.pcworld.com/47863	• NVidia GeForce 6200 graphics chip • 256M8 DDR SDRAM	• Ports: DVI-out, 15-pin VGA out, S-Video out • 30-day trials of multimedia apps	• Doom 3: 15 fps • Far Cry: 17 fps • Halo: 23 fps	The E-GeForce 6200 offers dual-display support on the cheap, but its performance in our frame-rate tests was disappointing.

FOOTNOTE: [1] Performance is based on a weighted average of frames per second. **HOW WE TEST:** We tested PCI Express boards on a MIcro Express PC with a 3.66-GHz Pentium 4 processor, 1G8 of DDR SDRAM, SATA hard drives in a striped RAID configuration, and Windows XP Pro. We measure performance as an average of frame rates seen at different settings when running the games Doom 3, Far Cry, Halo, Splinter Cell, Unreal Tournament 2004, and Wolfenstein Enemy Territory, and a Commanche 4 benchmark demo. We measure frame rates at the 1024 by 768 and 1600 by 1200 resolutions, both using 32-bit color with antialiasing turned on and off. **CHART NOTE:** Prices given are street prices as of 4/25/05. Star ratings are based on performance, design, and features, but not price. Price taken into consideration for 8est 8uy honors only. See find.pcworld.com/10860 for more on *PC World's* Star Ratings.

PHOTOGRAPH: MARC SIMON

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MORE REVIEWS

MISSED AN ISSUE OF *PC World* or passed your copy along to a friend? Here's a recap of *Top 100* topics from previous issues. To read reviews of the products listed in these charts, go online and type in the *PC World* Find-It URL from the top of each chart. Next month in the *Top 100*, we'll look at monochrome laser printers and DVD drives; and our Spotlight review will explore the technologies and features inside the newest wave of DV cameras. Also be on the lookout for an in-depth story on the faster, farther-reaching MIMO (Multiple Input Multiple Output) wireless networking products.

HP'S networkable OfficeJet 7210 All-In-One produces high-quality prints quickly.

NIKON'S compact and versatile Coolpix 5600 earned Best Buy honors in June.

SHUTTLE Computer's XPC i8600b packs power and value in a tiny box.

INKJET MULTIFUNCTION PRINTERS

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1	HP OfficeJet 7210 All-In-One	Best BUY (★★★★½ June 05) find.pcworld.com/47608
2	Canon Pixma MP760	Best BUY (★★★★½ June 05) find.pcworld.com/47556
3	Canon Pixma MP780	(★★★★☆ June 05) find.pcworld.com/47554
4	HP PSC 1610 All-In-One	(★★★½☆ Apr 05) find.pcworld.com/47610
5	Lexmark P6250	(★★★½☆ June 05) find.pcworld.com/47594
6	Epson Stylus Photo RX620	(★★★½☆ June 05) find.pcworld.com/47561
7	Dell Photo All-In-One Printer 942	(★★★½☆ June 05) find.pcworld.com/47588
8	Epson Stylus CX6600	(★★★☆☆ June 05) find.pcworld.com/43396
9	Brother MFC-5840CN	(★★★☆☆ June 05) find.pcworld.com/47552
10	Lexmark X7170	(★★★☆☆ June 05) find.pcworld.com/47563

From the June 2005 issue

POINT-AND-SHOOT DIGITAL CAMERAS

find.pcworld.com/47722

1	Nikon Coolpix 5600	Best BUY (★★★★☆ June 05) find.pcworld.com/47706
2	Nikon Coolpix 7900	(★★★★☆ June 05) find.pcworld.com/47704
3	HP Photosmart R717	Best BUY (★★★★☆ May 05) find.pcworld.com/47128
4	Nikon Coolpix 4800	(★★★★☆ Jan 05) find.pcworld.com/45116
5	Canon PowerShot S60	(★★★★☆ Oct 04) find.pcworld.com/43541
6	Casio Exilim EX-Z55	(★★★★☆ Jan 05) find.pcworld.com/45122
7	Olympus C-5500 SportZoom	(★★★½☆ June 05) find.pcworld.com/47708
8	Sony Cyber-shot DSC-T33	(★★★½☆ May 05) find.pcworld.com/47112
9	Canon PowerShot A510	(★★★½☆ May 05) find.pcworld.com/47090
10	Casio Exilim Pro EX-P505	(★★★☆☆ June 05) find.pcworld.com/47702

From the June 2005 issue

SPACE-SAVING PCs

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MINI-BOX SYSTEM	1	Shuttle Computer XPC i8600b	Best BUY (★★★★☆ June 05) find.pcworld.com/47600
MINI-BOX SYSTEM	2	Apple Mac Mini	(★★★★☆ June 05) find.pcworld.com/47592
THIN-PROFILE SYSTEM	1	Dell OptiPlex SX280	Best BUY (★★★★☆ June 05) find.pcworld.com/47596
THIN-PROFILE SYSTEM	2	IBM ThinkCentre A50	(★★★★☆ June 05) find.pcworld.com/47599
THIN-PROFILE SYSTEM	3	Gateway E-4300 4-Bay SB	(★★★½☆ June 05) find.pcworld.com/47597
THIN-PROFILE SYSTEM	4	HP Compaq Dc7100 Ultra-Slim Desktop	(★★★½☆ June 05) find.pcworld.com/47598
ALL-IN-ONE SYSTEM	1	Gateway Profile 5.5C	Best BUY (★★★★☆ June 05) find.pcworld.com/47602
ALL-IN-ONE SYSTEM	2	Sony VAIO VGC-V520G TV-PC	(★★★★☆ June 05) find.pcworld.com/47605
ALL-IN-ONE SYSTEM	3	MPC ClientPro 414 All-In-One	(★★★½☆ Mar 05) find.pcworld.com/45554
ALL-IN-ONE SYSTEM	4	Pelham Sloane PS1500M	(★★½☆☆ June 05) find.pcworld.com/47604

From the June 2005 issue

PHOTOGRAPHS: RICK RIZNER

HERE'S HOW

EDITED BY AOIFE M. McEVOY AND DENNIS O'REILLY

SECURITY TIPS

ANDREW BRANDT

Identify Malware Hiding in Windows' System Folders

IT'S NO FUN to go into Task Manager and discover that a bunch of mysterious processes are running on your PC. In the case of the unknowns, you may ask yourself how much of this stuff you actually want. Or more seriously, if anything on your machine is actually doing harm.

Unfortunately, few of us have more than a passing familiarity with what's under Windows' hood: the programs that run it and that run alongside it. In this column, I'll explain how to identify most Windows system files (and to research an unknown file) so you can tell the good ones from the miscreants. I'll also show you how to trace every application running on your PC, including the newest menace to emerge—hidden rootkit files.

Of course, as with tremors on the San Andreas Fault, you can never know where or when the next security breach will open up and swallow your data whole. Even if you run a firewall, use up-to-date antivirus and anti-spyware scanners; and maintain strict download discipline, you can still end up with the latest and meanest infectious agents in your PC.

Antivirus and other security tools need frequent and detailed updates to work effectively; they can't block a piece of malware that they haven't seen before. Consequently, these programs always suffer a period of vulnerability between the time when source code for a new worm hits the Internet, for example, and the time when the antivirus definitions to block or clean the infection are available for download. Whether it's for a few minutes or for many days, that window always gapes open when new threats appear.

Fortunately, once identified, malware is usually fairly easy—albeit tedious—to clean up. So follow my detection procedures, and your PC will be in good shape.

SAFETY FIRST

FIRST, AND MOST important, remember that this is the operating system you're dealing with, so don't leap into your system files, deleting things willy-nilly as soon as you suspect trouble. If you blow it, you may render Windows unbootable.

Second, cover your behind at every step. System Restore (in Windows XP and Me) can safely return you to the point just before you crashed. Click *Start•Programs* (*All Programs* in XP)*•Accessories•System Tools•System Restore*, select *Create a restore point*, and step through the wizard. Make a new restore point before each change.

You may also need to make your system files visible. Open Explorer or any folder window, and click *Tools•Folder Options•View*. Click *Show hidden files and folders*, and make sure that both 'Hide extensions for known file types' and 'Hide protected operating system files (Recommended)'

ILLUSTRATION: STUART BRADFORD

164 SECURITY TIPS
Stop the latest threats to your PC by identifying out-of-place files in system folders; a freebie banishes rootkits.

168 WINDOWS TIPS
A home-made shortcut puts Windows in standby with one click; FreeSnap keeps your open windows in line.

170 INTERNET TIPS
A no-cost way to access your PC from anywhere via any browser; Microsoft's free Outlook backup add-in program.

171 HARDWARE TIPS
Save the planet—and a little green of your own—by recycling your old gear; DiskMon shows disk activity for free.

172 ANSWER LINE
Run your disk-maintenance programs automatically via Windows' Scheduled Tasks utility; a free program prints a list of all your PC's installed applications.

169

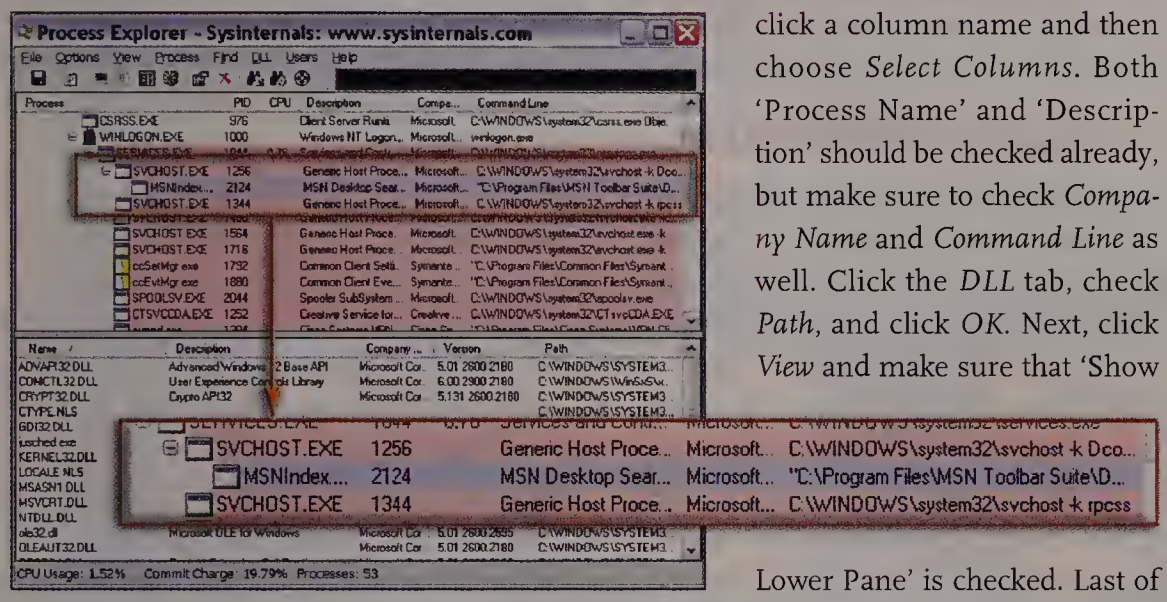


FIGURE 1: PROCESS EXPLORER HELPS you identify the programs associated with your running processes.

are unchecked. Click *Yes* if you see any Windows warnings. (More on warnings later.) Run your up-to-date antivirus and anti-spyware apps. Finally, delete a file only if you strongly believe it's part of a malware infestation. For example, don't use the following techniques to remove old DLLs from your system folders.

FIND OUT WHAT'S RUNNING

NOW YOU'RE READY to determine what programs and services are currently running on your PC. Windows' Task Manager can't authenticate each of your running apps, so browse to find.pcworld.com/47569 for a copy of the free Process Explorer from Sysinternals.

Unzip the procexpnt.zip file, and then double-click the file named *procexp.exe*. Process Explorer is the sumo wrestler of Task Manager replacements: It may not look pretty, but it's dependable and very effective. And unlike the top sumo pros, it does its job for free.

Some of Process Explorer's most useful info is hidden by default. To see it, right-click a column name and then choose *Select Columns*. Both 'Process Name' and 'Description' should be checked already, but make sure to check *Company Name* and *Command Line* as well. Click the *DLL* tab, check *Path*, and click *OK*. Next, click *View* and make sure that 'Show Lower Pane' is checked. Last of all, click *View•Lower Pane View•DLLs* (see **FIGURE 1**).

With these Process Explorer options on, you can select any process and see listed in the lower pane the DLLs that the program uses. The Command Line column shows the hard-drive location of every running program, or—in the case of services (which sometimes run under svchost.exe)—it identifies which instance of svchost.exe invoked that service.

Any processes running from the Temp folder should raise a red flag. Spyware tends to install itself in and run from such out-of-the-way nooks as the Temp folder. Likewise, if a running process points to a DLL in the Temp folder, be wary. The only occasion when something should be running from the Temp folder is when you are installing an application that uses an installer program such as InstallShield. In addition to Explorer.exe, Windows XP users will likely find other processes running, including smss.exe, winlogon.exe, services.exe, alg.exe, and lsass.exe. All of these are critical Windows files. Don't nix any of them.

One legitimate Windows file that bears a little more scrutiny when found in the running-processes list is rundll32.exe. Some forms of malware, distributed as DLL files, hide themselves by using this program as a launching pad. Task Manager indicates only that the rundll32 program is running, but Process Explorer's Command Line field shows you which DLL rundll32 is associated with. Still, keep in mind that some device drivers use rundll32 for legitimate purposes, so before killing the process, make sure it's actually doing damage. The folder name at the end of the file path should give you a clue about the process's legitimacy.

IDENTIFY MYSTERY PROCESSES

YOU LIKELY HAVE several other Windows program files running in addition to these OS files, including ones for applications and services running in the background, and drivers for your hardware. These files normally start with Windows. Examine the Description, Company ▶

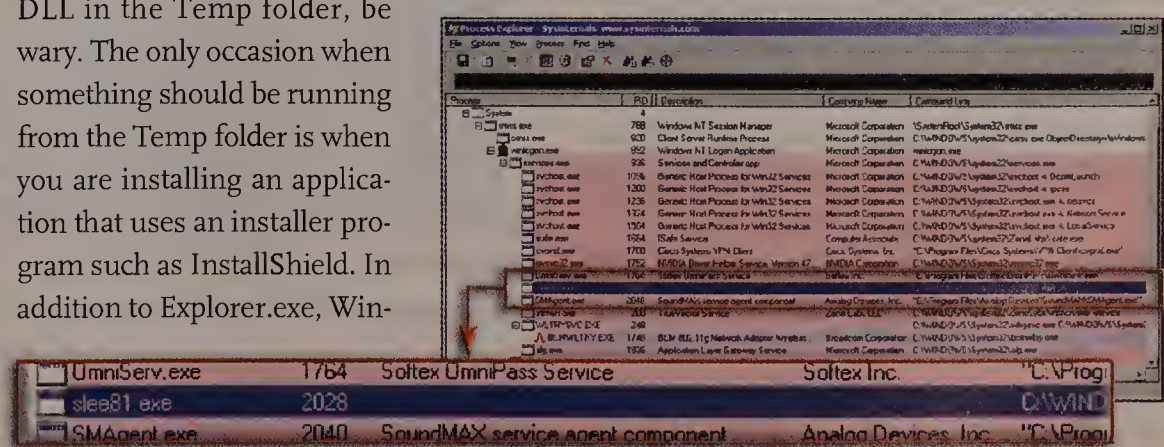


FIGURE 2: THE COMMAND LINE COLUMN in Process Explorer tells you where the process resides on your hard drive, which helps you ID it if the process lacks a Description entry.

Name, and Command Line information for each process. You should be able to identify most of the programs associated with processes as software you installed or that was preinstalled on your PC.

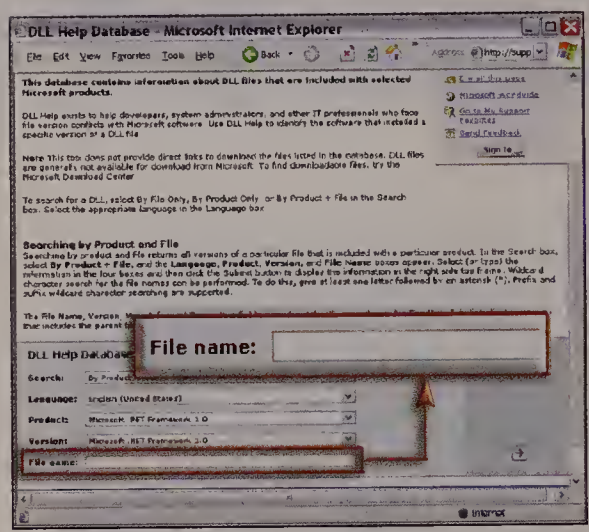


FIGURE 3: GET THE LOWDOWN on a DLL by entering it in Microsoft's DLL Help Database.

When a software maker has failed to include a Description and/or Company Name for its program, you'll need to dig a little deeper. Right-click its entry in Process Explorer's list, and choose *Properties*. If the information under the Image tab leaves you scratching your head, click the *Services* tab. Some legitimate services that are listed in the indented column below 'services.exe' in Process Explorer's main window (without text in their Description field) will appear under this tab.

For example, Process Explorer once showed two processes running on my PC without Description or Company Name entries. One was 'slee81.exe' (see **FIGURE 2**); when I looked at the process's entry under the Services tab, it identified the file as Steganos Live Encryption Engine. I had installed the Steganos software myself, so I wasn't surprised to find its components running in the background. This isn't a security threat, but unless I'm using Steganos to encrypt and decrypt files, I can save some CPU cycles by turning the service off until I need it.

The second file, 'WLTRYSVC.EXE', was even easier to puzzle out from its Services entry. While the name of the process ('WLTRYSVC service') isn't any more illuminating than its file name, a slightly indented file sits just below it in Process Explorer's main window, which means that 'WLTRYSVC' launched another app, called 'BCMWLTRY.EXE'. That file is identified as the 'Broadcom Wireless Network Tray Applet,' which I installed to display Wi-Fi signal strength. Since I'm likely to be using my Wi-Fi connection frequently, that's a process I want to keep.

Follow these steps to identify all of your running services and background apps. The tricky part comes when something you find doesn't identify itself and doesn't seem to serve a purpose. That's when it's time to look to the Internet for answers.

ONLINE VERMIN TRACKERS

IF I SUSPECT A DLL might be bogus, the first place I check is Microsoft's DLL Help Database (find.pcworld.com/47576; see **FIGURE 3**), which lets me search for information about a DLL by name. If I suspect a file may be connected to spyware, I'll dig around in Computer Associates' Spyware Information Center at find.pcworld.com/47690. Another great resource is the Pest Encyclopedia at the PestPatrol Center for Pest Research (find.pcworld.com/47579), which provides information about more than 27,000 forms of malware.

If I can't tell whether a file is legitimate, I check the Task List Programs pages at AnswersThatWork.com (see **FIGURE 4**) for info about legitimate software as well as spyware and viruses. Tools such as WinPatrol (find.pcworld.com/47582) and Uniblue's WinTasks 5 Professional (find.pcworld.com/47584) offer insight into whether a program or DLL is malware.

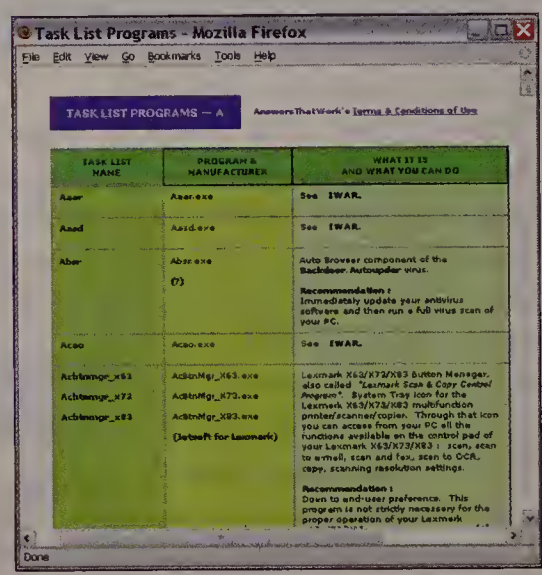


FIGURE 4: TELL LEGITIMATE startup apps from bogus ones at AnswersThatWork.com.

SECURITY TOOLBOX

Hunting Hidden Files

THE LAST STOP on our processes tour concerns a new breed of malware called kernel-level rootkits. These tools permit malicious hackers to hide their tracks (and files) on an infected PC. Fortunately, several available programs will help you spot, and in one case, remove, these dangerous rootkit files.

For sheer analytical power, no competing rootkit remover can outperform Sysinternals' RootkitRevealer (find.pcworld.com/47586), which ferrets out files and Registry keys that might be associated with rootkits. The program is far from foolproof, however: Not all of the items it uncovers are malware. Visit find.pcworld.com/47587 to learn how RootkitRevealer works, and how to use it effectively.

For point-and-click ease, F-Secure's BlackLight tool (free while it's in beta, from www.f-secure.com/blacklight) puts the antivirus company's knowledge to use in a rootkit scanner that finds and disarms rootkit files on your hard drive. Though spartan in design, the tool won't leave a hidden Trojan horse in place.

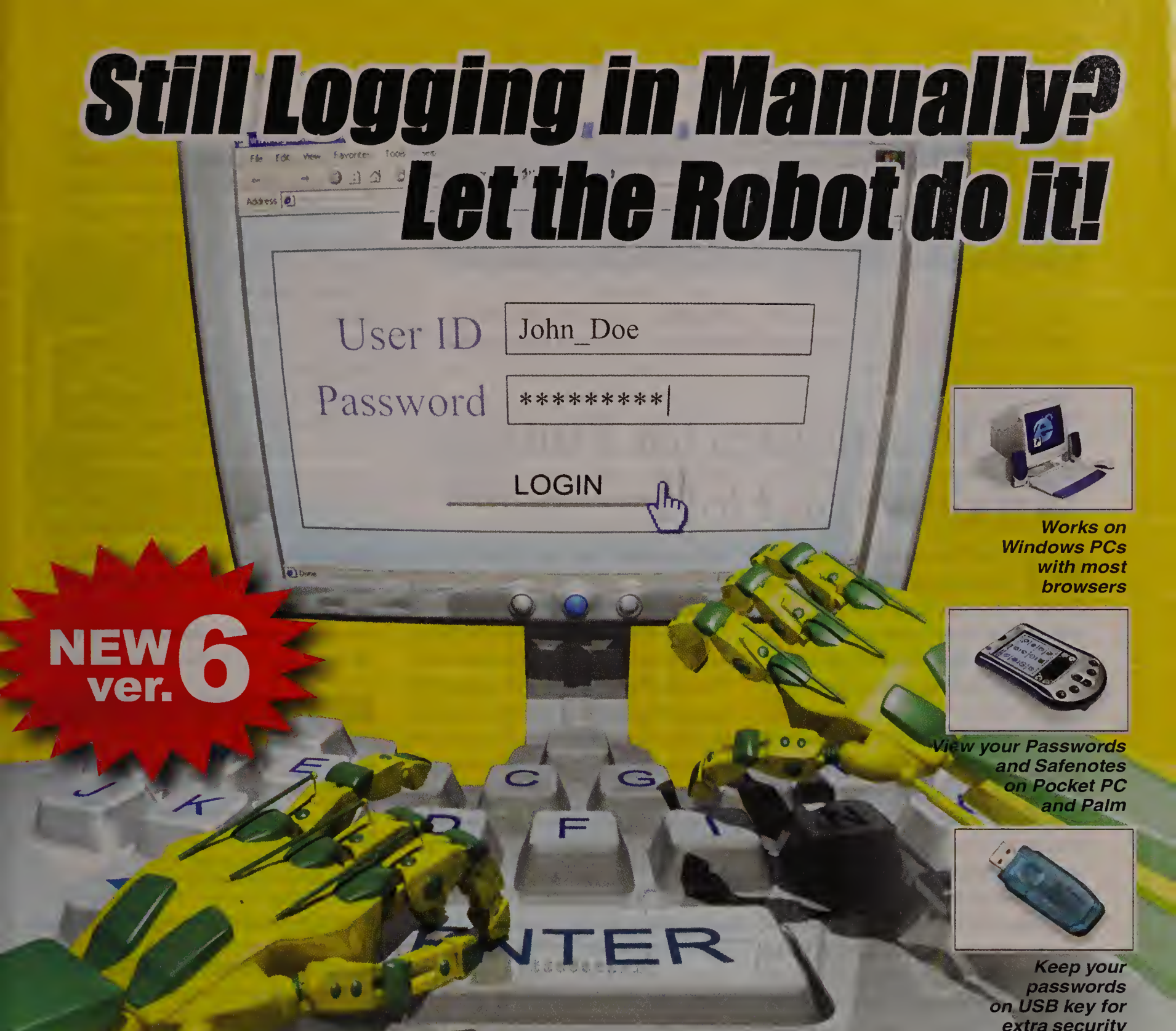
Both offer an online database containing information about thousands of DLLs and apps you might encounter, though WinTasks also can "blacklist" specific processes so that they can't run again.

If you hunt for malware on a regular basis, Neuber Software's Security Task Manager (find.pcworld.com/48062) lets you evaluate every executable, driver, or DLL, whether or not it's running.

Bottom line: You can't always trust the first few results when you research an unknown file on the Web. Even if a hundred small sites post data about a suspected piece of malware, one page on a Microsoft site that explains the legitimate use of the file can trump those analyses. The more you find out about a file before you search online, the less likely it is that you'll kill a legitimate program or DLL. ■

Andrew Brandt is a PC World *senior associate editor and author of the monthly* Privacy Watch *column (see page 40).*

Still Logging in Manually? Let the Robot do it!



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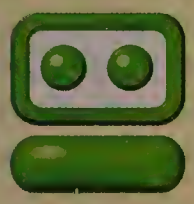

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WINDOWS TIPS

SCOTT DUNN

STANDBY VERSUS HIBERNATE MODE

HANDY COMMAND-LINE SHORTCUTS

MOVE WINDOWS WITH PRECISION

Top Techniques for Putting Windows on Hold

? I JUMP ON AND OFF the computer several times a day to read e-mail via a dial-up connection. Is there an easier way to put my PC in "suspend" or standby mode when I'm done than by navigating through the Start menu each time?

John Gilson
Southern Shores, North Carolina

Windows 2K XP 98 ME

YOU CAN USE a number of techniques in Windows XP and 2000 to save power or help protect your privacy every time you leave your system unattended. It depends on what you want to do—and how often you want to do it. Try these scenarios:

Lock it up: If you just want a way to screen your PC from prying eyes, the fastest way is to press **<Windows>-l**, which takes you back to the Welcome or log-in screen (Windows XP only). Note: Some older keyboards don't have the <Windows> key.

One-button magic: If saving power is a concern, consider using either standby mode or hibernate mode. Standby is fast, whereas hibernate is slower but safer. First, standby mode: When you put your computer on standby, your PC essentially enters a low-power state that turns off your monitor and hard drive. This is useful for saving energy during brief periods of inactivity—when you leave your PC to grab a sandwich, say. But be aware that any changes you made to your open files prior to entering standby mode aren't yet saved to your hard drive; your PC still relies on limited power to the system to preserve your work. If a power failure occurs while your PC is on standby, you could lose any unsaved data. Second, hibernate: If you want to save your data to disk, play it safe and use the hibernate feature, which stores your system's state (everything currently in RAM) to your hard disk; doing this, as you might expect, takes longer than going into standby.

The simplest way to get to standby mode is to convert your PC's power button into a button that goes directly there: In the Address bar in any Windows Explorer or Internet Explorer window, type **control panel\power options** and press **<Enter>**. Then click the *Advanced* tab in the Power Options Properties dialog box. Under Power Buttons, click the drop-down list labeled 'When I press the power button on my computer' and choose *Stand by* (see **FIGURE 1**).

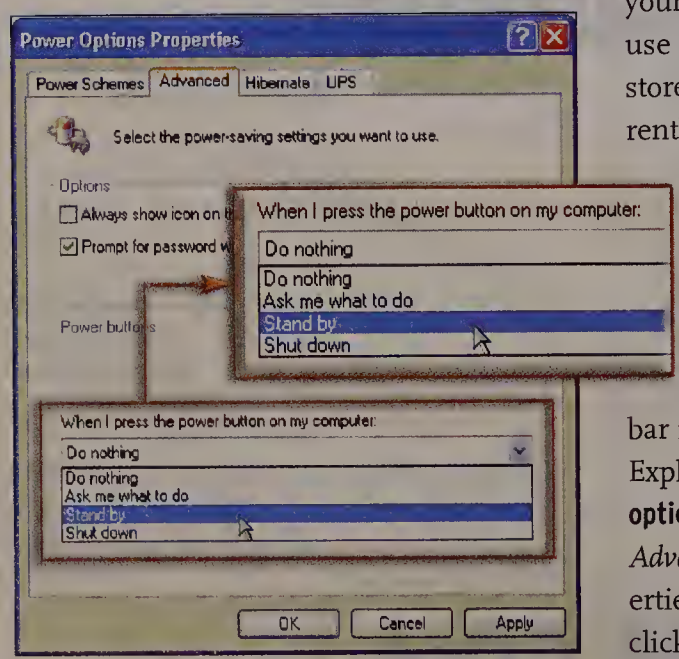

FIGURE 1: HIJACK YOUR PC's power button and turn it into a "Standby" button instead.

If you're a laptop user, you're likely to see additional options, such as a drop-down list labeled 'When I close the lid of my portable computer' that lets you send the system into standby with that simple gesture (see **FIGURE 2**).

Some PCs even have their own sleep button (or a sleep function that you activate by holding down a <Fn> key, as in the case of many IBM ThinkPads). Configure this button by using the 'When I press the sleep button on my computer' drop-down list. For a more secure standby mode, click the *Advanced* tab and make sure *Prompt for password when computer resumes from standby* is checked in the Options section. On the other hand, if you want to go right back to work without the password bother, remove the check mark. When you're done, click *OK*. From now on, pressing the power button on your machine will force the PC into standby mode—it will not shut off all power.

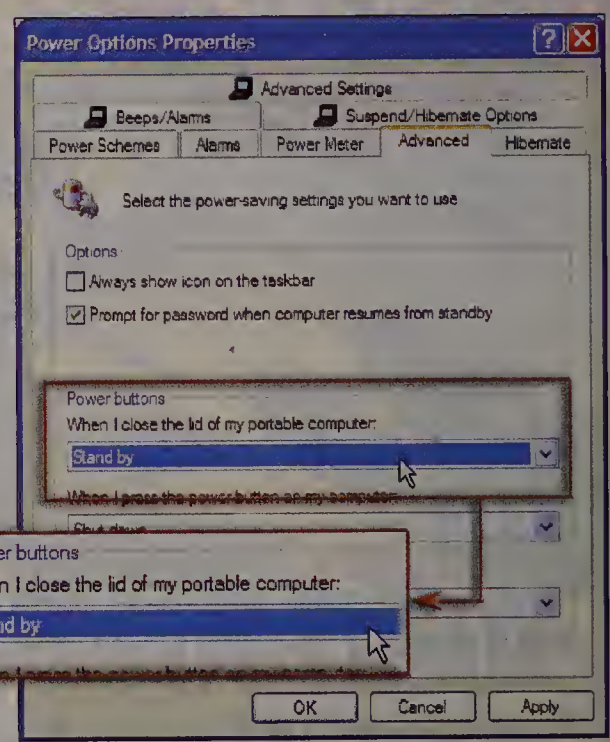

FIGURE 2: GOT NOTEBOOK? Send Windows into standby mode just by shutting the lid.

But what about when you really want to power down? Most computers automatically turn off when Windows exits, so that shouldn't be a problem. But if exiting Windows doesn't shut off the power to your PC, you may want to plug your PC, monitor, and so on into a power strip. That way, you'll be able to cut the power to your system—after exiting Windows—even though your PC's reconfigured

power button no longer handles that job.

Custom shortcuts: If you don't want your PC's power switch to be your standby trigger, create a shortcut that does the same thing, provided that you log on to your computer as an administrator. The easiest way to do this is to run PsShutdown, a freeware command-line utility from the swell folks at Sysinternals. Get the utility from PCWorld.com's Downloads library at find.pcworld.com/47516. After you've finished downloading the file, simply extract psshutdown.exe from its .zip file and move it to the folder of your choice.

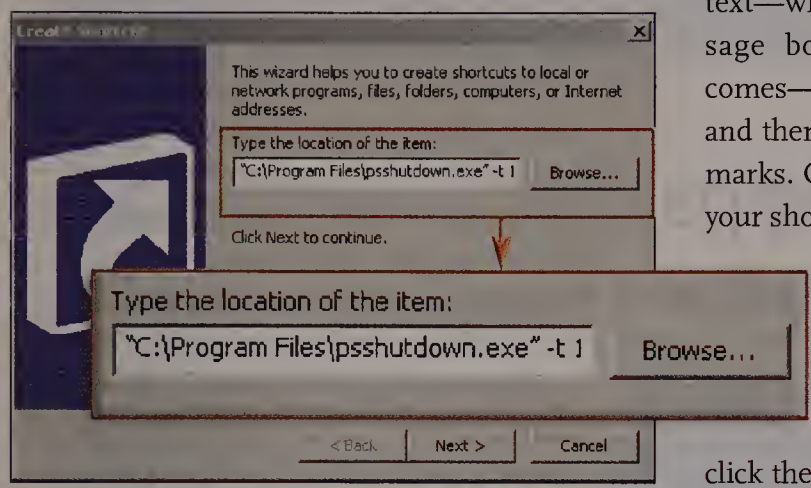

FIGURE 3: CREATE A STANDBY SHORTCUT with the free PsShutdown utility from Sysinternals.

Now you need to create your desktop shortcut: Right-click the desktop (or in any folder window where you want to store the shortcut) and choose *New•Shortcut*. In the Create Shortcut wizard, type the path to psshutdown.exe, using quotation marks if any folder in the path contains a space or is longer than eight characters—for example, **"C:\Program Files\psshutdown.exe"** (your path, of course, may vary). After that, type a space followed by **-d** to initiate standby mode. (Replace this with **-h** if you want a shortcut that makes your computer hibernate.) To control how much time elapses before the command takes effect, type another space followed by **-t** followed by a space followed by the number of seconds (two digits maximum).

For example, to initiate standby mode almost immediately after launching the shortcut, you would type **-t 1** or even **-t 0** (see **FIGURE 3**). To add your own custom text—which will appear in a message box right before the end comes—add **-m** followed by a space and then the message in quotation marks. Click *Next*, type a name for your shortcut, and click *Finish*.

Now right-click the shortcut icon you just created and choose *Properties*. With the Shortcut tab in front, click the *Shortcut key* box and press the keys you want to use to launch the standby maker. The keyboard shortcut you use must begin with one of the following key combinations: **<Ctrl>-<Alt>**, **<Ctrl>-<Shift>**, **<Alt>-<Shift>**, or **<Ctrl>-<Alt>-<Shift>** (see **FIGURE 4**). This keyboard shortcut will work only for as long as the icon resides either on the desktop or in one of the folders in the Start menu hierarchy. Finally, if you want to make your shortcut stand out, use the *Change Icon* button. When you're done, click *OK*. Launch the shortcut by clicking the icon or by typing its key combination whenever you want to put your system on standby.

The one drawback to PsShutdown? Once the program executes the standby command, there's no Cancel button available to undo what you've done. The solution is to create another shortcut icon that you can click to cancel the actions of the first. Use the Create Shortcut wizard as explained above; this time, however, end the command line with the **-a** switch (for "abort")—for example, **"C:\Program Files\psshutdown.exe" -a** (your path may vary). Click *Next*, type a name such as **Cancel Standby**, and click *Finish*. You may also need to edit the command line of the standby shortcut itself (right-click it and choose *Properties*) to confirm that its delay value—the number you entered after the -t switch—gives you adequate time to launch the canceling shortcut. Afterward, if you happen to launch your standby shortcut accidentally, simply launch the cancel standby shortcut to stop the standby process in the nick of time. ■

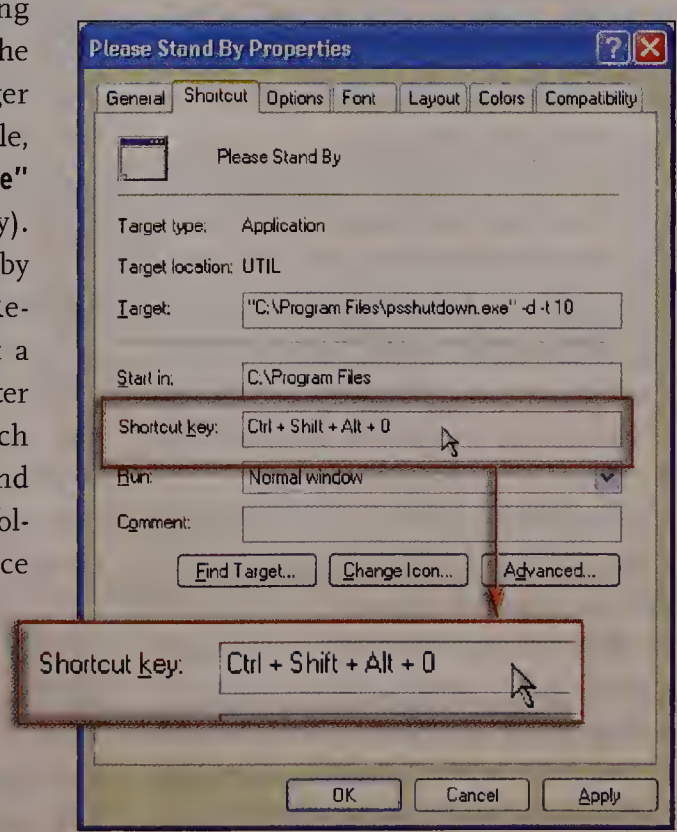

FIGURE 4: USE KEYS you select in the Shortcut tab of the Properties dialog box to launch your shortcut.

WINDOWS TOOLBOX

Get an Edge on Window Management With FreeSnap

Windows 2K XP 98 ME

IF YOU LIKE your windows to align to some (but not all) edges of your screen, you know how tedious it can be to drag each edge to make it fit just the way you want it. Fortunately, Blue Onion Software offers a quick way to handle this and other window management chores with FreeSnap (available at find.pcworld.com/47522). Once you launch this utility, you can use various keyboard shortcuts (such as <Windows>-<Up Arrow>) to snap the top, left, right, or bottom edges of the active window to the edge of the screen. To undo the effect, just repeat the shortcut. FreeSnap also lets you use a keyboard shortcut to toggle between maximized and regular mode, and you can use different shortcuts to cycle through different standard screen sizes (800 by 600 and 1024 by 768, for example)—useful for Web designers who want to fit their work to multiple screen resolutions.

Send Windows-related questions and tips to scott_dunn@pcworld.com. We pay $50 for published items. Visit find.pcworld.com/31607 for more Windows Tips. *Scott Dunn is a contributing editor for* PC World.

INTERNET TIPS

SCOTT SPANBAUER

Access Your Files and Apps From Anywhere for Free

IN THESE FAST TIMES, leaving your work at the office is tough to do. You end up working at home, at the airport, at the in-laws', and even at the coffee shop. But no matter how well you prepare for these out-of-office travails, it's easy to forget an important file back at the cube farm. What if you could just connect to your office computer over the Internet?

You can, of course. Citrix's GoToMyPC remote-access service (www.gotomypc.com) costs $20 a month and allows you to move files from and to a remote PC, and otherwise control that machine. Using WebEx Communications' MyWebExPC (www.mywebexpc.com) to access a remote system doesn't cost anything, but to make file transfers you'll need the $10-per-month MyWebExPC Pro version. (Look for reviews of these and other remote-access programs in next month's issue.) Fortunately for us tightwads, a treasure buried in Windows XP Professional offers many of the same remote-access features; all you have to do is set it up.

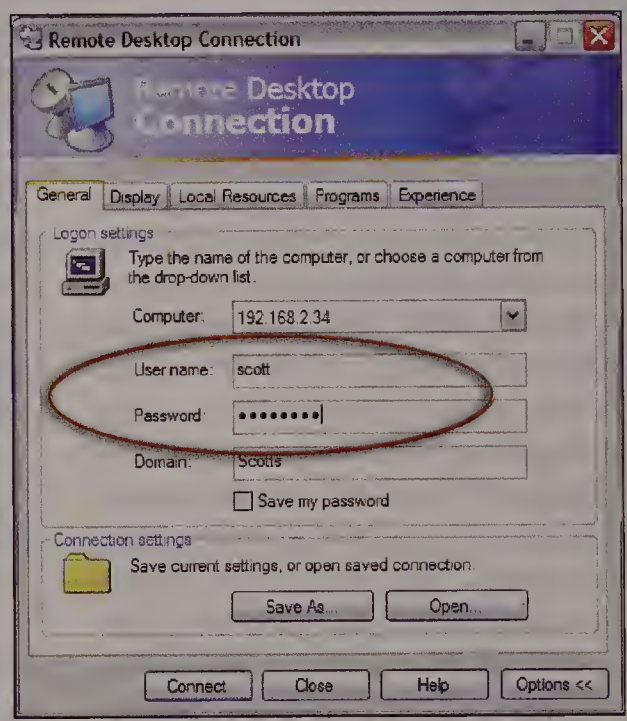

FIGURE 1: STAY REMOTELY connected to your home or office PC via Windows XP's Remote Desktop.

Windows XP's Remote Desktop allows you to configure one computer as a client (the computer where you are) and another as a host (the one where you aren't). The big caveat here is that the host system must be running Windows XP Professional—the Home Edition includes only the client part of Remote Desktop.

To enable your XP Pro system as a Remote Desktop Server (the host), right-click *My Computer*, choose *Properties*, select *Remote*, and in the 'Remote Desktop' section, check *Allow users to connect remotely to this computer*. To determine which of the system's users to permit to connect remotely, click *Select Remote Users*. As long as your user account is part of the system's Administrator group, you'll be able to log in using your regular Windows user name and password. Once you have verified that your account has access, click *OK* twice.

To set up an XP system as a Remote Desktop client, choose *Start•All Programs•Accessories•Communications•Remote Desktop Connection*. (For earlier Windows versions, visit find.pcworld.com/47530 to download and install Microsoft's free Remote Desktop Connection utility.) Select the *General* tab (click *Options* if no General tab is visible). In the 'Computer' field, enter the remote PC's IP address (or its name, if it's on the local network); then type your user name and password into their respective fields (see **FIGURE 1**). To transfer files, click *Local Resources* and check *Disk Drives* under 'Local devices'. Click *Connect* to take control of the remote system. Select *Help* for explanations of Remote Desktop's many other features.

If you can't connect, make sure that you aren't being blocked by hardware or software firewalls. If the host PC uses a private IP address (the most common version is 192.168.*xxx.xxx*, where the *x*'s vary from one address to the next), you must configure your firewall/router to forward incoming connections to it. For more information on these and other connection woes, go to find.pcworld.com/47533 and consult Microsoft's Remote Desktop troubleshooting guide.

If your version of Windows doesn't support remote connections, or if you want to connect to or from a Macintosh or Linux system, try a free tool based on AT&T's Virtual Network Computing protocols. RealVNC (www.realvnc.com) was developed by former AT&T engineers, while UltraVNC (ultravnc.sourceforge.net) gets high marks for its performance-boosting Windows driver. For more on RealVNC, read Scott Dunn's July 2004 *Windows Tips* column (find.pcworld.com/47806). ■

EASIER OUTLOOK BACKUPS

AFTER READING the lead item, "Where Are My E-Mail, Addresses, and Calendars?" in last December's column (find.pcworld.com/47534), reader Stephen Krehley of Hicksville, New York, sent a note pointing out that Microsoft offers an easier way to back up your Outlook files. The free, 160KB Personal Folders Backup add-in for Outlook 2000, 2002, and 2003 prompts you to make backup copies of your personal folders, inbox, calendar, and contacts at regular intervals. Browse to find.pcworld.com/47535 to download your copy.

Send your questions and tips to nettips@spanbauer.com. We pay $50 for published items. Go to find.pcworld.com/31523 for more Internet Tips. *Scott Spanbauer is a contributing editor for* PC World.

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HARDWARE TIPS

KIRK STEERS

Is There Gold in Your Attic? Cash In Your Old PC

OLD COMPUTERS ARE more valuable than they used to be. Not too long ago, buying a new PC meant foisting your old system on an unsuspecting relative or friend. But now, even an early Pentium system may be worth something to someone. If your PC is less than six years old and in reasonable working order, you may be able to squeeze a few more productive hours—or even a few dollars—out of it. Here are your old-tech options.

Trade it in: Before you buy a new PC, see if the vendor offers any trade-in discounts. HP frequently runs special short-term trade-in promotions. As I write this, trading in a "good condition" Dell Dimension 4600 under HP's Ditch Your Dinosaur desktop promotion merits a $187 discount on a new HP5000. See find.pcworld.com/47536 to get a quote for your PC.

Under Gateway's trade-in discounts, the same Dell system mentioned above nets you a rebate check of $162 after you purchase a Gateway or EMachines product (find.pcworld.com/47537).

Give it away: Donating your PC to a charity can improve both your karma and your finances. Dell and HP will help you donate old computers to the nonprofit National Cristina Foundation (www.cristina.org), which gives them to the disadvantaged.

You can take the fair market value—but not the replacement value—of a donated system as a tax deduction. See IRS Publication 526 (find.pcworld.com/47538) for more details on what you can and can't deduct. A bonus: Donate a PC through Dell, and you'll get a coupon for a 10 percent discount on purchases from the Dell Home Systems Software and Peripherals Web site (find.pcworld.com/47539).

What kinds of PCs can be donated? According to Dell, the company will accept any working Pentium-class notebook or desktop with a hard drive, monitor, keyboard, and mouse. Include serial numbers, registration keys, and any other available documentation for all software installed on the system. Nonfunctioning machines may be accepted on a case-by-case basis. Check with other vendors and charities for their minimum PC-donation requirements. For more information, visit the TechSoup site (www.techsoup.org) and click *Donate Hardware* under 'Hardware Recycling' in the left pane.

Donate as many software and hardware extras with the PC as possible. If you're an educator, check out Microsoft's Fresh Start for Donated Computers program, which helps schools rejuvenate machines with damaged or missing operating systems (find.pcworld.com/47540).

Before you donate, wipe any personal info from the hard drive. Since powerful data-recovery programs are readily available, simply deleting files or reformatting the hard drive won't do; you need to overwrite your files with a disk-wiping utility such as Jetico's free BCWipe program (find.pcworld.com/47541).

Recycle it: If your old PC doesn't qualify for a trade-in or donation, recycle it. Computers, monitors, and peripherals contain lead, mercury, and other nasty chemicals that demand special handling. Throwing your system in the trash is not only a very bad idea, it may also be illegal: California and Massachusetts are among the states that have enacted laws prohibiting the disposal of a CRT monitor in a landfill.

If you're buying a new PC or printer, see if the manufacturer offers free recycling; Dell currently includes a coupon for free recycling with each PC or printer. Visit find.pcworld.com/47542 for details.

Dell, HP, and IBM will recycle computer products from any manufacturer for a fee ranging from $10 to $34 (see the chart above). For information on free and low-cost recycling alternatives, check the Web sites of the Electronic Industries Alliance (www.eiae.org) and the National Recycling Coalition (www.nrc-recycle.org). ■

Computer Recycling Fees

HERE ARE THE RATES three vendors charge for equipment disposal. You provide the box and packing material; they pay for shipping.

EQUIPMENT	Dell[1]	HP	IBM[2]
PC (without monitor)	$10	$31	$30
Monitor (LCD or CRT)	$10	$29	$30
Laser printer	$10	$34	$30
Inkjet printer	$10	$17	$30
PDA	$10	$13	$30

FOOTNOTES: [1] $10 per airway bill (one bill covers one box). [2] $30 per box (maximum 26 by 26 by 26 inches, 69 pounds).

DISK WATCHER

IF YOU AREN'T paranoid about viruses and spyware, you haven't been paying attention. Antivirus and other security programs are only as good as their last update (see the *Security Tips* column on page 164 for more on this issue). One sign of possible trouble is frequent hard-disk activity. The free DiskMon utility from Sysinternals puts indicators in Windows' system tray that flash whenever your disk reads and writes. Remember: Most of the activity is valid, but a drive in overdrive for an extended period when no programs are active could be trying to tell you something. Browse to find.pcworld.com/47546 for the download.

Go to find.pcworld.com/31511 for past Hardware Tips *columns. Send your tips and questions to kirk_steers@pcworld.com. We pay $50 for published items. Kirk Steers is a* PC World *contributing editor.*

ANSWER LINE

LINCOLN SPECTOR

Let Windows Handle PC Maintenance for You

WHAT MAINTENANCE routines should I run regularly, and how often? Can I automate the process?

Chester Knapp, Cincinnati

THERE ARE THREE critical maintenance chores for the PC:

Back up: The last thing you should do every workday is create a backup of your data. Visit find.pcworld.com/47548 for our list of the best free backup programs.

Although most backup utilities let you schedule backups ahead of time, you're better off getting into the habit of running yours manually. That way, you can insert the media (DVD, external hard drive, or whatever) and remove it afterward, which is safer than leaving your backup in or attached to your computer.

Scan for viruses: Scan your hard drive for viruses, Trojan horses, and other forms of malicious software at least once a week.

Scan and defrag your hard drive: Click *Start•Programs* (*All Programs* in XP)*•Accessories•System Tools•Disk Defragmenter.* Select the disk or partition you want to defragment (if necessary), and click *Defragment.* To run ScanDisk in Windows 98 or Me, select *Start•Programs•Accessories•System Tools•ScanDisk.* Choose the disk you want to check, select *Automatically fix errors* if you prefer not to verify each one, and click *Start.* In Windows 2000 and XP, right-click the drive you want to scan in Explorer or any folder window and then click *Properties.* Click the *Tools•Check Now* button under 'Error-checking' (see **FIGURE 1**). If you check 'Automatically fix file system errors' in the next dialog box, you may be told that you need to restart to complete the test. Otherwise, click the *Start* button and then click *OK* twice.

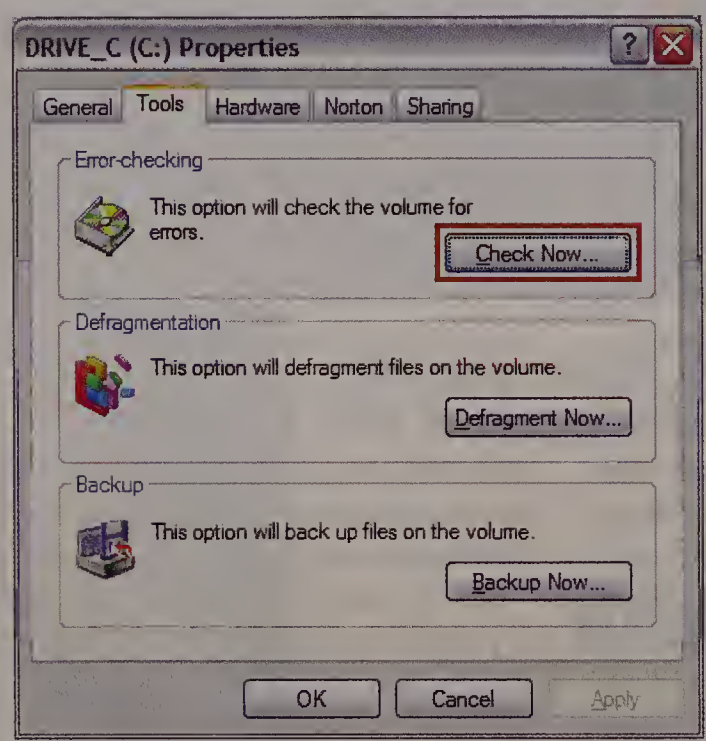

FIGURE 1: TO KEEP YOUR HARD DRIVE healthy, scan it for errors monthly; automate the scan via Scheduled Tasks.

You can automate maintenance by using Windows' Scheduled Tasks program. In 98 and Me, open ScanDisk, click *Advanced,* and select *Never* in the 'Display summary' section. Click *OK.* In the main ScanDisk window, select *Thorough,* check *Automatically fix errors,* and click *Start•Cancel•Close* (don't do the scan now). In Windows 2000 or XP, open Notepad or your text editor. Type **y**, press **<Enter>**, click *File•Save,* and name the file **c:\y.txt**. Scheduled Tasks won't run in Windows XP without a log-on password. See find.pcworld.com/47550 for details and instructions for creating one, if necessary. Windows 2000 users must download the free AutoDeFrag utility from MorphaSys (find.pcworld.com/47551); store this small program in your C:\winnt folder.

Now you're ready to open the Scheduled Task Wizard: Select *Start•Programs* (*All Programs* in Windows XP)*•Accessories•System Tools•Scheduled Tasks•Add Scheduled Task.* Choose anything when asked to pick a program; you'll change this later. Give the task an appropriate name, and set it to run monthly at an appropriate time. On the last page of the wizard, click *Open advanced properties.*

When the wizard finishes, a dialog box will open. Click the *Tasks* tab and change the Run field to one of these strings:

For a monthly disk scan in Windows 2000 or XP, type **command /c chkdsk /r < c:\y.txt** (this scans the next time Windows boots, and once a month thereafter).

To defrag a disk in Windows 98 or Me, type **defrag /all /noprompt /f**.

To defrag in 2000, type **autodefrag**.

To defrag in XP, enter **defrag c:**.

To scan in 98 or Me, type **scandskw /n**.

Create separate entries for your scan and defrag. (Defrag after you scan.) Then sit back and let Windows do the work. ■

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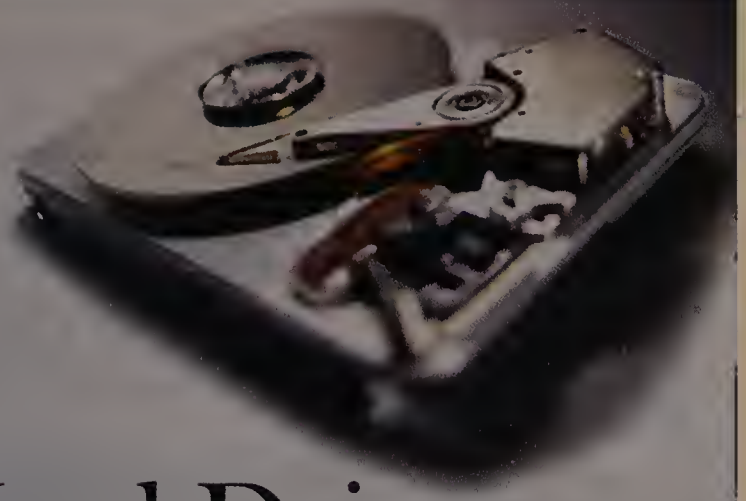

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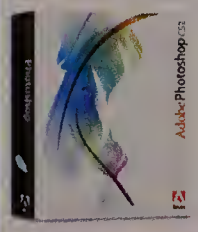

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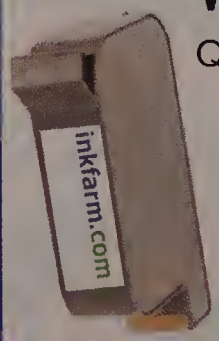

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FULL DISCLOSURE

STEPHEN MANES

Voice Recognition: Ready for Prime Time

IT MAY BE A LITTLE premature, but I already have a pretty good idea about my nominee for next year's World Class Product of the Year. (See page 86 for this year's World Class winners.) I'm not entirely sure which product I'll root for, but I'm almost positive it will have something to do with broad-vocabulary speech recognition.

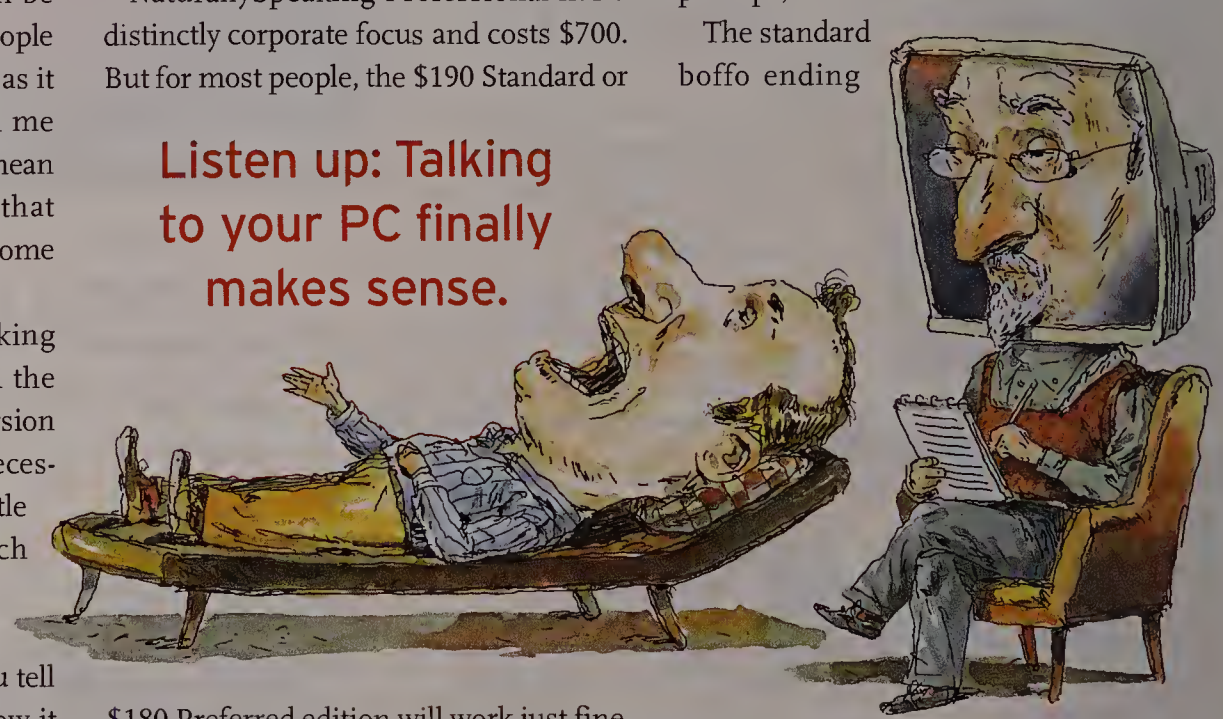
Yes, I know the old joke: Useful speech recognition is just three years away—and has been for two decades now. Even these days, I suspect, the technology will be slow to catch fire, mainly because people won't believe that it can work as well as it does. But two products have shown me that speech recognition (and I don't mean just the limited-vocabulary stuff that phone-mail-hell systems use) has become downright powerful.

For years, Dragon NaturallySpeaking (now owned by Scansoft) has been the best voice dictation product. Now version 8 of the application fulfills its predecessors' promise by delivering lots of little improvements that add up to much greater usability. Not only does the software present a more-useful-than-ever list of alternatives when you tell it that it has made a mistake, but now it allows you to correct your own verbal mistakes by selecting the error and then saying what you actually meant.

A new auto-punctuation mode attempts to insert periods at the ends of sentences, but it's so limited and inconsistent that you're better off sticking with the old-fashioned practice of speaking all the punctuation marks. And it's a shame the software can't automatically return you to the spot where you were working before you stopped to correct an earlier word. On the other hand, the software lets me talk fast, even on a five-year-old machine. And more than once I've dictated a quick draft on my notebook; the software's included noise-cancelling headset now goes into my traveling bag on every trip.

NaturallySpeaking Professional has a distinctly corporate focus and costs $700. But for most people, the $190 Standard or $180 Preferred edition will work just fine.

Listen up: Talking to your PC finally makes sense.



Right as I was beginning to realize how cool Dragon is, I spent some time with VoiceSignal's new VoiceMode software. Unlike NaturallySpeaking—which lets you talk pretty much the way you normally do, except for the punctuation—VoiceMode requires that...you...say...every...word...separately. Amazingly, though, it works not on a PC with lots of RAM and a fast CPU, but on a lowly cell phone that costs just $80 with a two-year contract.

Thanks to its built-in VoiceMode, Samsung's P207 phone, which is available from Cingular, allows you to speak text messages—and it's sufficiently accurate to be genuinely practical. Dictation would be even more welcome in an advanced handheld that can do e-mail, but even in this relatively basic phone it can free your thumbs from agony. In addition, the P207 lets you dial a contact's number from your address book by saying that person's name—a less impressive trick, perhaps, but a valuable one nonetheless.

The standard boffo ending to a column like this is the revelation that it was dictated, not typed—and indeed, I wrote this with NaturallySpeaking. But we're getting to the point where voice recognition, in an array of products, should be considered just another way to work faster and better. World Class, I'm talking to you—and I don't mean in 2008. ■

Contributing Editor Stephen Manes is cohost of the weekly public TV series PC World's Digital Duo *(www.pcworld.com/digitalduo).*

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Midnight blue

Burgundy
(Only at Sony Style)

Silver
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T Series
Build-to-Order VAIO
VGN-T300 Notebook
$2,299.99
No interest for 12 months.
Payments as low as $[illegible]/month.

Free 30-Day Cingular® Laptop Connect Wireless WAN Service Trial.[4]

Sony recommends Microsoft® Windows® XP.

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Build-to-Order VAIO
VGN-A600 Notebook
Stunning images on a 17" screen, a huge-capacity hard drive, and available built-in wireless connectivity.

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New FS Series
Build-to-Order VAIO
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More than enough power to deliver the most sophisticated multiumedia experience.

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S Series
Build-to-Order VAIO
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A creative powerhouse that lets you work smarter, faster, and more productively than ever before.

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Your Sony VAIO PC is designed to get the very best performance out of Sony Cyber-shot® digital still cameras and Handycam® camcorders.

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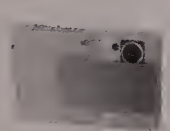

DSC-M1 Cyber-shot Digital Still Camera
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DCR-DVD403 DVD Handycam Camcorder
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SONY

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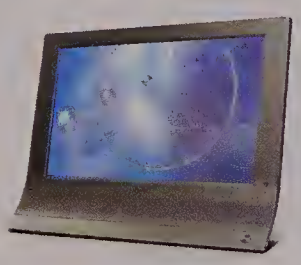

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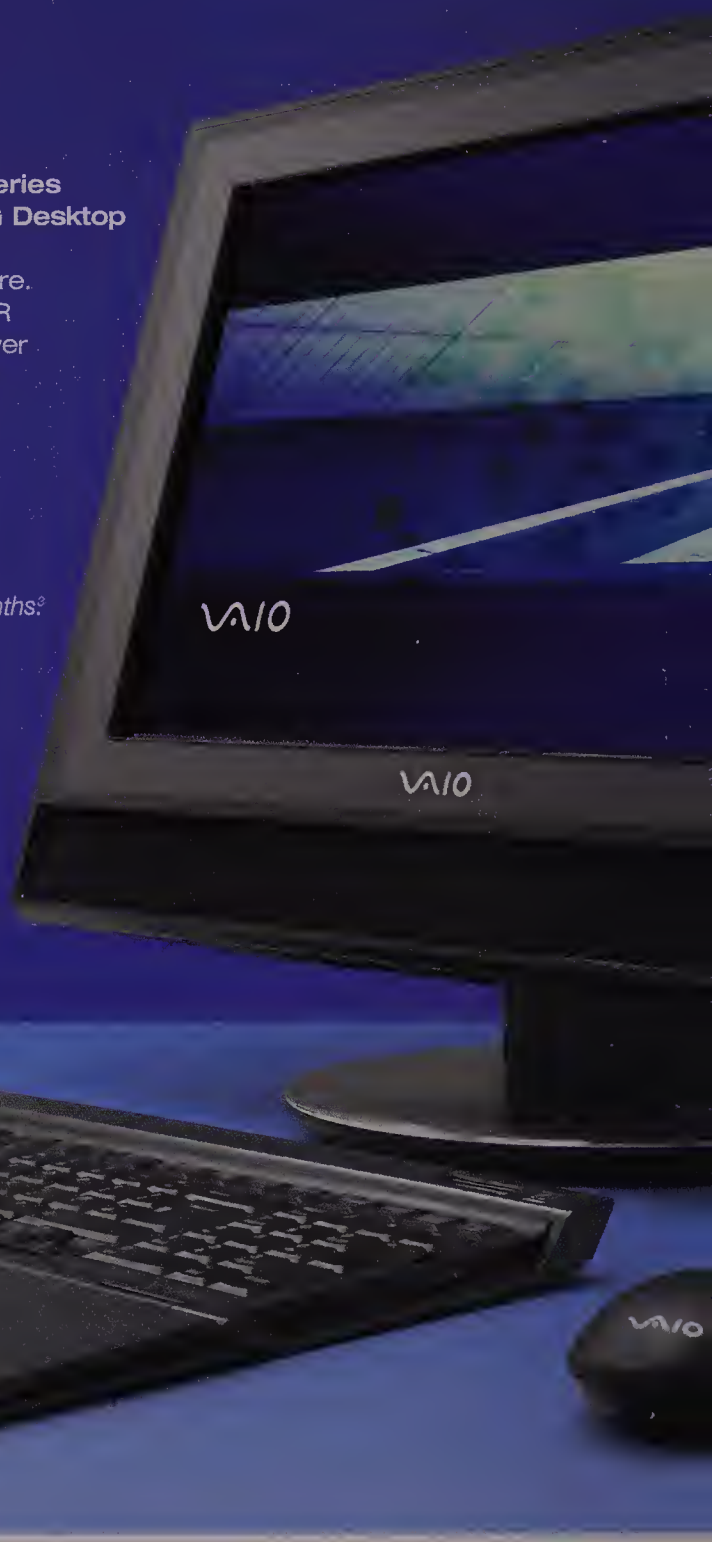

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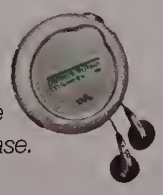
Get five music downloads from Connect™ music store with your NW-E107 purchase. (Offer ends 12/31/05.)[5]



VRD-VC10 DVDIRECT™ DVD Recorder[2]
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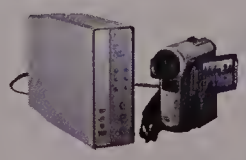

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